

Table 4A.2-16. Taxi and FHV Toll Volumes Entering/Leaving the Manhattan CBD by Screen Line/Crossing (2045)

	Daily Volumes								Percent Change						
		Scenario							Scenario						
Scenario	No Action	A	B	C	D	E	F	G	A	B	C	D	E	F	G
(by Screen Line/ Crossing)															
Total	132,656	138,683	154,909	151,623	135,041	147,599	158,508	136,033	4.5%	16.8%	14.3%	1.8%	11.3%	19.5%	2.5%
60th Street	41,578	41,765	50,684	51,367	43,181	49,315	55,614	40,153	0.4%	21.9%	23.5%	3.9%	18.6%	33.8%	-3.4%
Inbound	22,780	23,265	27,915	29,344	25,933	29,118	32,416	22,413	2.1%	22.5%	28.8%	13.8%	27.8%	42.3%	-1.6%
Outbound	18,825	18,530	22,801	22,055	17,277	20,226	23,226	17,772	-1.6%	21.1%	17.2%	-8.2%	7.4%	23.4%	-5.6%
FDR DRIVE+WEST SIDE HWY	24,426	17,867	22,244	21,729	18,256	21,771	25,592	16,884	-26.9%	-8.9%	-11.0%	-25.3%	-10.9%	4.8%	-30.9%
West Side Highway / Route 9A	11,197	7,805	9,461	8,713	7,094	8,544	10,067	7,447	-30.3%	-15.5%	-22.2%	-36.6%	-23.7%	-10.1%	-33.5%
FDR Drive	13,229	10,062	12,783	13,016	11,162	13,227	15,525	9,437	-23.9%	-3.4%	-1.6%	-15.6%	0.0%	17.4%	-28.7%
WEST AVENUES	6,880	5,755	7,255	6,334	4,763	5,556	6,674	5,291	-16.4%	5.5%	-7.9%	-30.8%	-19.2%	-3.0%	-23.1%
West End Ave	758	1,024	1,422	1,177	649	766	1,143	910	35.1%	87.6%	55.3%	-14.4%	1.1%	50.8%	20.1%
Broadway	2,756	1,672	1,991	1,668	1,161	1,437	1,665	1,479	-39.3%	-27.8%	-39.5%	-57.9%	-47.9%	-39.6%	-46.3%
Amsterdam	1,431	1,418	1,809	1,657	1,351	1,581	1,843	1,281	-0.9%	26.4%	15.8%	-5.6%	10.5%	28.8%	-10.5%
Columbus Ave	1,493	977	1,247	934	682	726	972	924	-34.6%	-16.5%	-37.4%	-54.3%	-51.4%	-34.9%	-38.1%
Eighth Avenue	442	664	786	898	920	1,046	1,051	697	50.2%	77.8%	103.2%	108.1%	136.7%	137.8%	57.7%
EAST AVENUES	10,272	18,143	21,185	23,304	20,162	21,988	23,348	17,978	76.6%	106.2%	126.9%	96.3%	114.1%	127.3%	75.0%
Fifth Avenue	1,929	940	1,166	788	529	658	780	958	-51.3%	-39.6%	-59.1%	-72.6%	-65.9%	-59.6%	-50.3%
Madison Avenue	209	110	184	152	154	127	204	127	-47.4%	-12.0%	-27.3%	-26.3%	-39.2%	-2.4%	-39.2%
Park Avenue	1,872	1,580	1,827	1,772	1,418	1,626	1,886	1,544	-15.6%	-2.4%	-5.3%	-24.3%	-13.1%	0.7%	-17.5%
Lexington Avenue	608	797	1,052	1,428	1,055	1,231	1,166	778	31.1%	73.0%	134.9%	73.5%	102.5%	91.8%	28.0%
Third Avenue	959	758	994	1,058	1,040	1,341	1,333	712	-21.0%	3.6%	10.3%	8.4%	39.8%	39.0%	-25.8%
Second Avenue	1,343	7,570	8,531	9,717	9,243	10,016	10,209	7,608	463.7%	535.2%	623.5%	588.2%	645.8%	660.2%	466.5%
First Avenue	554	1,855	1,994	2,099	1,849	1,837	1,997	1,835	234.8%	259.9%	278.9%	233.8%	231.6%	260.5%	231.2%
York Avenue	2,128	1,820	2,065	1,778	1,267	1,619	1,839	1,674	-14.5%	-3.0%	-16.4%	-40.5%	-23.9%	-13.6%	-21.3%
Ed Koch Queensboro Ramp	670	2,713	3,372	4,512	3,607	3,533	3,934	2,742	304.9%	403.3%	573.4%	438.4%	427.3%	487.2%	309.3%
Queens	51,738	57,927	60,848	55,870	51,454	53,728	54,879	57,848	12.0%	17.6%	8.0%	-0.5%	3.8%	6.1%	11.8%
Inbound	25,996	28,635	30,072	24,689	21,247	22,083	22,614	28,577	10.2%	15.7%	-5.0%	-18.3%	-15.1%	-13.0%	9.9%
Outbound	25,745	29,296	30,778	31,184	30,210	31,649	32,268	29,274	13.8%	19.5%	21.1%	17.3%	22.9%	25.3%	13.7%
Ed Koch Queensboro Bridge	7,468	14,678	16,418	27,707	31,369	33,102	33,680	14,513	96.5%	119.8%	271.0%	320.0%	343.3%	351.0%	94.3%
Queens-Midtown Tunnel	44,270	43,249	44,430	28,163	20,085	20,626	21,199	43,335	-2.3%	0.4%	-36.4%	-54.6%	-53.4%	-52.1%	-2.1%
Brooklyn	28,064	23,897	28,051	29,656	26,520	29,540	33,347	22,929	-14.8%	0.0%	5.7%	-5.5%	5.3%	18.8%	-18.3%
Inbound	12,826	10,654	12,596	15,798	15,189	16,714	18,682	10,197	-16.9%	-1.8%	23.2%	18.4%	30.3%	45.7%	-20.5%
Outbound	15,246	13,251	15,461	13,864	11,338	12,832	14,671	12,740	-13.1%	1.4%	-9.1%	-25.6%	-15.8%	-3.8%	-16.4%
Williamsburg Bridge	7,208	7,896	9,499	11,956	12,349	14,284	15,763	7,603	9.5%	31.8%	65.9%	71.3%	98.2%	118.7%	5.5%
Manhattan Bridge	2,253	1,955	2,921	2,595	1,618	2,117	2,963	1,797	-13.2%	29.6%	15.2%	-28.2%	-6.0%	31.5%	-20.2%
Brooklyn Bridge	3,497	1,887	2,473	2,253	1,737	2,042	2,597	1,657	-46.0%	-29.3%	-35.6%	-50.3%	-41.6%	-25.7%	-52.6%
Hugh Carey Tunnel	15,106	12,159	13,158	12,852	10,816	11,097	12,024	11,872	-19.5%	-12.9%	-14.9%	-28.4%	-26.5%	-20.4%	-21.4%
New Jersey	11,276	15,094	15,326	14,730	13,886	15,016	14,668	15,103	33.9%	35.9%	30.6%	23.1%	33.2%	30.1%	33.9%
Inbound	5,259	7,306	7,457	6,618	5,865	6,721	6,417	7,312	38.9%	41.8%	25.8%	11.5%	27.8%	22.0%	39.0%
Outbound	6,020	7,790	7,872	8,115	8,024	8,297	8,254	7,794	29.4%	30.8%	34.8%	33.3%	37.8%	37.1%	29.5%
Holland Tunnel	3,915	6,603	6,859	6,788	6,748	7,594	7,136	6,834	68.7%	75.2%	73.4%	72.4%	94.0%	82.3%	74.6%
Lincoln Tunnel	7,361	8,491	8,467	7,942	7,138	7,422	7,532	8,269	15.4%	15.0%	7.9%	-3.0%	0.8%	2.3%	12.3%

Note: Taxis and FHVs would potentially be exempt from the CBD toll, receive a toll discount, or be subject to some other toll reduction such as a cap.

Table 4A.2-17. Truck Toll Volumes Entering/Leaving the Manhattan CBD by Screen Line/Crossing (2045)

Daily Volumes									Percent Change						
Scenario									Scenario						
Scenario	No Action	A	B	C	D	E	F	G	A	B	C	D	E	F	G
(by Screen Line/ Crossing)															
Total	140,805	124,489	123,697	122,869	121,203	118,152	118,163	133,112	-11.6%	-12.2%	-12.7%	-13.9%	-16.1%	-16.1%	-5.5%
60th Street	52,051	41,877	41,575	40,337	39,157	38,317	38,943	43,833	-19.5%	-20.1%	-22.5%	-24.8%	-26.4%	-25.2%	-15.8%
Inbound	27,554	21,729	21,532	20,309	19,279	18,808	19,279	22,946	-21.1%	-21.9%	-26.3%	-30.0%	-31.7%	-30.0%	-16.7%
Outbound	24,527	20,172	20,073	20,058	19,909	19,540	19,696	20,954	-17.8%	-18.2%	-18.2%	-18.8%	-20.3%	-19.7%	-14.6%
FDR DRIVE+WEST SIDE HWY	4,739	4,684	4,653	4,979	5,295	5,370	5,228	4,803	-1.2%	-1.8%	5.1%	11.7%	13.3%	10.3%	1.4%
West Side Highway / Route 9A	1,609	2,180	2,183	2,372	2,493	2,492	2,443	2,242	35.5%	35.7%	47.4%	54.9%	54.9%	51.8%	39.3%
FDR Drive	3,130	2,504	2,470	2,607	2,802	2,878	2,785	2,561	-20.0%	-21.1%	-16.7%	-10.5%	-8.1%	-11.0%	-18.2%
WEST AVENUES	19,208	15,421	15,245	14,583	14,145	13,943	14,205	16,274	-19.7%	-20.6%	-24.1%	-26.4%	-27.4%	-26.0%	-15.3%
West End Ave	4,623	2,284	2,187	1,666	1,329	1,152	1,344	2,809	-50.6%	-52.7%	-64.0%	-71.3%	-75.1%	-70.9%	-39.2%
Broadway	6,450	6,596	6,635	6,849	6,956	7,060	6,988	6,517	2.3%	2.9%	6.2%	7.8%	9.5%	8.3%	1.0%
Amsterdam	4,247	2,700	2,585	2,279	2,056	1,944	2,043	3,172	-36.4%	-39.1%	-46.3%	-51.6%	-54.2%	-51.9%	-25.3%
Columbus Ave	2,771	2,675	2,669	2,587	2,553	2,545	2,587	2,642	-3.5%	-3.7%	-6.6%	-7.9%	-8.2%	-6.6%	-4.7%
Eighth Avenue	1,117	1,166	1,169	1,202	1,251	1,242	1,243	1,134	4.4%	4.7%	7.6%	12.0%	11.2%	11.3%	1.5%
EAST AVENUES	28,104	21,772	21,677	20,775	19,717	19,004	19,510	22,756	-22.5%	-22.9%	-26.1%	-29.8%	-32.4%	-30.6%	-19.0%
Fifth Avenue	2,013	1,856	1,853	1,720	1,643	1,616	1,670	1,869	-7.8%	-7.9%	-14.6%	-18.4%	-19.7%	-17.0%	-7.2%
Madison Avenue	887	831	828	825	824	823	831	818	-6.3%	-6.7%	-7.0%	-7.1%	-7.2%	-6.3%	-7.8%
Park Avenue	4,186	3,474	3,507	3,425	3,433	3,363	3,386	3,462	-17.0%	-16.2%	-18.2%	-18.0%	-19.7%	-19.1%	-17.3%
Lexington Avenue	3,803	3,281	3,253	3,266	3,275	3,293	3,361	3,222	-13.7%	-14.5%	-14.1%	-13.9%	-13.4%	-11.6%	-15.3%
Third Avenue	3,927	4,051	4,040	4,039	3,789	3,639	3,721	4,038	3.2%	2.9%	2.9%	-3.5%	-7.3%	-5.2%	2.8%
Second Avenue	6,070	4,432	4,341	3,790	3,091	2,729	2,951	5,289	-27.0%	-28.5%	-37.6%	-49.1%	-55.0%	-51.4%	-12.9%
First Avenue	2,753	2,653	2,663	2,665	2,689	2,567	2,628	2,919	-3.6%	-3.3%	-3.2%	-2.3%	-6.8%	-4.5%	6.0%
York Avenue	1,330	851	849	721	644	634	632	794	-36.0%	-36.2%	-45.8%	-51.6%	-52.3%	-52.5%	-40.3%
Ed Koch Queensboro Ramp	3,135	343	343	324	329	340	330	345	-89.1%	-89.1%	-89.7%	-89.5%	-89.2%	-89.5%	-89.0%
Queens	25,494	24,760	24,583	23,990	23,102	22,203	22,599	26,008	-2.9%	-3.6%	-5.9%	-9.4%	-12.9%	-11.4%	2.0%
Inbound	14,324	13,561	13,469	13,350	12,946	12,498	12,636	13,912	-5.3%	-6.0%	-6.8%	-9.6%	-12.7%	-11.8%	-2.9%
Outbound	11,174	11,202	11,116	10,642	10,159	9,707	9,968	12,107	0.3%	-0.5%	-4.8%	-9.1%	-13.1%	-10.8%	8.3%
Ed Koch Queensboro Bridge	19,337	19,124	18,998	18,354	17,339	16,401	17,884	20,399	-1.1%	-1.8%	-5.1%	-10.3%	-15.2%	-7.5%	5.5%
Queens-Midtown Tunnel	6,157	5,636	5,585	5,636	5,763	5,802	4,715	5,609	-8.5%	-9.3%	-8.5%	-6.4%	-5.8%	-23.4%	-8.9%
Brooklyn	34,484	31,412	31,265	31,554	31,733	31,150	30,743	33,905	-8.9%	-9.3%	-8.5%	-8.0%	-9.7%	-10.8%	-1.7%
Inbound	14,068	13,071	13,001	12,782	12,689	12,589	12,790	14,164	-7.1%	-7.6%	-9.1%	-9.8%	-10.5%	-9.1%	0.7%
Outbound	20,423	18,347	18,270	18,779	19,053	18,570	17,962	19,756	-10.2%	-10.5%	-8.0%	-6.7%	-9.1%	-12.1%	-3.3%
Williamsburg Bridge	10,192	10,141	10,073	10,221	10,491	10,334	10,309	11,200	-0.5%	-1.2%	0.3%	2.9%	1.4%	1.1%	9.9%
Manhattan Bridge	15,711	13,062	12,976	13,170	12,923	12,472	12,250	14,453	-16.9%	-17.4%	-16.2%	-17.7%	-20.6%	-22.0%	-8.0%
Brooklyn Bridge	3,920	3,578	3,594	3,613	3,838	3,884	3,831	3,655	-8.7%	-8.3%	-7.8%	-2.1%	-0.9%	-2.3%	-6.8%
Hugh Carey Tunnel	4,661	4,631	4,622	4,550	4,481	4,460	4,353	4,597	-0.6%	-0.8%	-2.4%	-3.9%	-4.3%	-6.6%	-1.4%
New Jersey	28,776	26,440	26,274	26,988	27,211	26,482	25,878	29,366	-8.1%	-8.7%	-6.2%	-5.4%	-8.0%	-10.1%	2.1%
Inbound	18,333	17,080	17,028	18,057	18,652	18,086	17,325	18,704	-6.8%	-7.1%	-1.5%	1.7%	-1.3%	-5.5%	2.0%
Outbound	10,447	9,363	9,248	8,934	8,561	8,400	8,556	10,669	-10.4%	-11.5%	-14.5%	-18.1%	-19.6%	-18.1%	2.1%
Holland Tunnel	14,154	13,032	13,013	13,260	13,355	12,993	12,409	15,178	-7.9%	-8.1%	-6.3%	-5.6%	-8.2%	-12.3%	7.2%
Lincoln Tunnel	14,622	13,408	13,261	13,728	13,856	13,489	13,469	14,188	-8.3%	-9.3%	-6.1%	-5.2%	-7.7%	-7.9%	-3.0%

Table 4A.2-18. Work Journeys to the Manhattan CBD by Origin County (2045)

Daily Journeys									Percent Change						
Scenario									Scenario						
Scenario	No Action	A	B	C	D	E	F	G	A	B	C	D	E	F	G
Total Work Journeys to CBD	1,721,640	1,721,655	1,721,653	1,721,653	1,721,648	1,721,648	1,721,661	1,721,658	0%	0%	0%	0%	0%	0%	0%
CBD	176,850	176,489	176,318	176,869	177,285	177,255	176,945	176,898	0%	0%	0%	0%	0%	0%	0%
CBD	176,850	176,489	176,318	176,869	177,285	177,255	176,945	176,898	0%	0%	0%	0%	0%	0%	0%
New York City	900,213	896,111	895,284	894,681	892,272	891,895	892,553	893,645	0%	-1%	-1%	-1%	-1%	-1%	-1%
Upper Manhattan	181,180	179,641	180,058	179,640	179,104	179,291	179,192	179,662	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Bronx	110,581	109,817	109,447	109,567	109,724	109,634	109,951	109,627	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Brooklyn	306,259	304,652	304,406	304,288	302,575	302,669	303,268	303,730	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Queens	274,950	274,259	273,649	273,230	272,605	271,943	272,024	273,063	0%	0%	-1%	-1%	-1%	-1%	-1%
Staten Island	27,243	27,742	27,724	27,956	28,264	28,358	28,118	27,563	2%	2%	3%	4%	4%	3%	1%
Long Island	153,583	154,954	156,151	155,085	154,165	153,939	154,948	155,847	1%	2%	1%	0%	0%	1%	1%
Nassau	106,854	107,027	108,324	107,046	105,860	105,833	106,850	107,663	0%	1%	0%	-1%	-1%	0%	1%
Suffolk	46,729	47,927	47,827	48,039	48,305	48,106	48,098	48,184	3%	2%	3%	3%	3%	3%	3%
Upstate New York	123,941	122,506	123,195	122,872	123,358	122,661	123,197	123,330	-1%	-1%	-1%	0%	-1%	-1%	0%
Dutchess	6,965	7,092	6,857	6,941	6,995	7,031	7,033	7,035	2%	-2%	0%	0%	1%	1%	1%
Orange	21,067	21,108	21,359	21,542	21,825	22,000	21,966	21,365	0%	1%	2%	4%	4%	4%	1%
Putnam	2,076	2,044	2,023	1,968	1,994	1,974	1,965	1,929	-2%	-3%	-5%	-4%	-5%	-5%	-7%
Rockland	10,303	9,752	10,279	10,534	10,212	10,069	10,435	10,202	-5%	0%	2%	-1%	-2%	1%	-1%
Westchester	83,530	82,510	82,677	81,887	82,332	81,587	81,798	82,799	-1%	-1%	-2%	-1%	-2%	-2%	-1%
New Jersey	288,193	292,469	292,005	293,257	294,986	296,494	295,065	292,459	1%	1%	2%	2%	3%	2%	1%
Bergen	37,798	37,866	37,844	38,344	38,555	38,674	38,729	37,651	0%	0%	1%	2%	2%	2%	0%
Essex	32,027	32,599	32,352	32,488	32,528	32,724	32,797	32,481	2%	1%	1%	2%	2%	2%	1%
Hudson	101,924	103,139	102,857	103,166	103,802	104,590	104,024	103,336	1%	1%	1%	2%	3%	2%	1%
Hunterdon	2,557	2,575	2,554	2,595	2,626	2,580	2,577	2,609	1%	0%	1%	3%	1%	1%	2%
Mercer	8,184	8,235	8,264	8,314	8,333	8,252	8,282	8,288	1%	1%	2%	2%	1%	1%	1%
Middlesex	29,124	29,635	29,510	29,645	29,982	29,791	29,670	29,558	2%	1%	2%	3%	2%	2%	1%
Monmouth	17,905	18,162	18,215	18,102	18,282	18,280	18,086	18,227	1%	2%	1%	2%	2%	1%	2%
Morris	8,629	8,881	9,006	9,080	9,024	9,219	9,026	8,900	3%	4%	5%	5%	7%	5%	3%
Ocean	12,604	12,650	12,759	12,695	12,633	12,725	12,706	12,639	0%	1%	1%	0%	1%	1%	0%
Passaic	9,327	10,028	10,035	10,190	10,319	10,409	10,171	10,112	8%	8%	9%	11%	12%	9%	8%
Somerset	5,287	5,494	5,464	5,517	5,490	5,661	5,561	5,476	4%	3%	4%	4%	7%	5%	4%
Sussex	3,248	3,263	3,285	3,333	3,279	3,338	3,305	3,297	0%	1%	3%	1%	3%	2%	2%
Union	18,494	18,829	18,764	18,689	19,013	19,132	19,029	18,759	2%	1%	1%	3%	3%	3%	1%
Warren	1,085	1,113	1,096	1,099	1,120	1,119	1,102	1,126	3%	1%	1%	3%	3%	2%	4%
Connecticut	78,860	79,126	78,700	78,889	79,582	79,404	78,953	79,479	0%	0%	0%	1%	1%	0%	1%
Fairfield	49,537	49,470	49,133	49,254	49,855	49,715	49,330	49,767	0%	-1%	-1%	1%	0%	0%	0%
New Haven	29,323	29,656	29,567	29,635	29,727	29,689	29,623	29,712	1%	1%	1%	1%	1%	1%	1%

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 4B.1, Transportation: Transportation and Traffic Methodology for NEPA Evaluation

2023

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Attachments

Attachment A. Methodology to Develop Local Traffic Volumes

Acronyms

BPM	Best Practice Model
BTA	Balanced Transportation Analyzer
CBD	Central Business District
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
EA	Environmental Assessment
ETC	Estimated Time of Completion
FDR Drive	Franklin D. Roosevelt Drive
FHV	For-Hire Vehicle
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HOV	High-Occupancy Vehicles
LOS	Level of Service
MPO	Metropolitan Planning Organization
MTA	Metropolitan Transportation Authority
NEPA	National Environmental Policy Act
NYCDOT	New York City Department of Transportation
NYMTC	New York Metropolitan Transportation Council
NYSDOT	New York State Department of Transportation
PATH	Port Authority Trans-Hudson
RFK Bridge	Robert F. Kennedy Bridge
TAZ	Transportation Analysis Zone
TBTA	Triborough Bridge and Tunnel Authority
VMT	Vehicle-Miles Traveled
VPPP	Value Pricing Pilot Program

Appendix 4B.1 Transportation and Traffic Methodology for NEPA Evaluation

4B.1-1 OVERVIEW

FHWA in cooperation with the TBTA—an affiliate of the MTA—the NYSDOT, and the NYCDOT (collectively, the Project Sponsors) have prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and the NEPA implementing regulations promulgated by the Council on Environmental Quality (40 CFR Parts 1500–1508) and FHWA (23 CFR Part 771). FHWA is serving as the lead Federal agency for the NEPA review. The EA will analyze the potential effects of implementing a program to reduce congestion in the Manhattan CBD in New York, New York. The Project purpose is to reduce traffic congestion in the Manhattan CBD in a manner that will generate revenue for future transportation improvements, pursuant to acceptance into FHWA’s Value Pricing Pilot Program (VPPP).

Appendix 4B.1 provides a summary of the initial transportation and traffic methodology that was shared with FHWA at the onset of their NEPA lead agency responsibility (and as updated based on their review of the initial submission). As such, the appendix has been used to guide and develop the transportation studies and the impact assessment chapters of the EA. Each impact assessment chapter of the EA has refined impact assessment methodologies and assessment results building from this original methodology framework for transportation modeling and traffic impact assessment.

4B.1-2 MODELING APPROACH

The environmental review will establish the No Action Alternative, which will be compared to the CBD Tolling Alternative, which for the EA review comprises multiple tolling scenarios for future analysis years 2023 (estimated time of completion or ETC) and 2045 (horizon year for conformity and indirect and cumulative project effects¹). The tolling scenarios will include variations in toll pricing as developed in coordination with variations in potential bridge and tunnel crossing credits. As appropriate, detailed impact assessment will be undertaken based on the determination of a specific tolling scenario.

The No Action Alternative and CBD Tolling Alternative will be analyzed for impacts upon regional travel patterns and local traffic conditions resulting from implementation of the Project. To incorporate all of these aspects into the overall modeling effort, the following model will be utilized:

- Best Practice Model (BPM), the regional travel demand forecasting model, developed by the New York Metropolitan Transportation Council (NYMTC), the region’s metropolitan planning organization (MPO).

To evaluate local traffic effects, the environmental review will also include a localized traffic assessment of 15 study areas consisting of approximately 102 intersections, including those immediately adjacent to the

¹ The CBD Tolling Alternative is required to demonstrate conformity with The New York Metropolitan Transportation Council (NYMTC)’s latest conformity model (2020U) for all analysis years up to the horizon year of 2045.

area of the Manhattan CBD subject to the toll. The review will evaluate 10 key highway corridors, leading to and from bridges or tunnels that connect to the Manhattan CBD or facilities used to bypass the Manhattan CBD entirely, which could experience an increase in traffic due to diversion of traffic in some toll scenarios.

Chapter 4, “Transportation,” and associated appendices of the NEPA document will include detailed outputs from the modeling work discussed in this methodology memo.

Setting Toll Rates and Schedules

The toll rate is a key variable in the modeling to determine shifts in travel patterns and among modes. However, the toll rate also changes depending upon whether crossing credits, exemptions or discounts are given to any facilities as ultimately, by statute, the Project must generate sufficient net revenues to fund \$15 billion for the MTA 2020–2024 Capital Program. In other words, the more crossing credits, exemptions or discounts, the higher the toll must be.

TBTA, assisted by MTA Planning, will use the Balanced Transportation Analyzer (BTA) initially to determine the toll rates to be used under different credit/exemption/discount tolling scenarios. The toll rates projected by the BTA for each of these tolling scenarios will then be used to model regional transportation effects using BPM.

The NEPA document will include a toll schedule for each tolling scenario, covering all time periods for the day. These rates will be presented in current 2019 dollars and escalated for the 2023 and 2045 CBD Tolling Alternative analysis years.

Regional Traffic Analysis

This analysis is based on a compilation of existing travel characteristics and forecasts of changes in travel demand using the BPM. It is the primary tool used to evaluate the effects of large-scale regional transportation projects included in the New York Regional Transportation Plan. It is adopted by NYMTC’s member agencies for use in regional transportation planning analyses and is the Federally recognized transportation forecasting tool for the region.

With the toll schedule generated by the BTA, the environmental review will use the BPM to model changes in regional travel patterns throughout the 28-county BPM study area. The BPM relies on socioeconomic forecasts developed by NYMTC specifically for long-range transportation forecasting and planning for use in the BPM. This forecast includes changes in population, households by income, as well as changes in employment by occupational class, and are provided at the Transportation Analysis Zone (TAZ) level as inputs to the BPM. Growth rates (or declines) between zones drive the overall growth or decline in trip-making behavior in the model.

The NEPA document will provide summaries of NYMTC forecasts at the district and/or county level for a more complete understanding of the key drivers affecting trip-making growth in the region. Districts, such as the Manhattan CBD, will be aggregations of TAZs to better understand travel pattern changes to, from, and within the Manhattan CBD. The document will also summarize how the BPM utilizes the underlying

population and employment data combined with all the regional transportation linkages to model route and mode choice.

For each CBD Tolling Alternative scenario, BPM outputs will be screened to identify any highways and roadways in the region with high volume-to-capacity (v/c) ratios and significant percentage changes in traffic volumes during the four time periods of analysis for the BPM (AM, midday [MD], PM, and Late Night [LN]) as shown in **Table 4B.1-1** for each tolling scenario. For the local traffic analysis, because the BPM does not model weekend travel patterns, the environmental review will assume that the traffic changes during the Saturday peak period will be similar to the weekday MD period. This assumption is consistent with data provided by StreetLight Data, Inc. (a third-party traffic data source), which shows similar general traffic conditions for the Saturday peak period and the weekday MD period. Saturday peak-period hours vary by location and will be detailed in the local traffic analysis.

Table 4B.1-1. Best Practice Model Analysis Periods

TIME PERIODS	TIME PERIOD
Weekday Morning Peak (AM)	6 a.m. to 10 a.m.
Weekday Midday (MD)	10 a.m. to 4 p.m.
Weekday Afternoon Peak (PM)	4 p.m. to 8 p.m.
Weekday Late Night (LN)	8 p.m. to 6 a.m.

Source: Best Practice Model, 2022

Specifically, this screening will identify roadway segments with a v/c ratio over 0.90 that experience a 5 percent or more increase in the traffic volume for any period and tolling scenario compared with the No Action Alternative.

Additionally, the screening will also identify changes in roadway volumes along key highways including the Gowanus Expressway, Staten Island Expressway, Brooklyn-Queens Expressway, Long Island Expressway, Trans-Manhattan/Cross Bronx Expressway, Major Deegan Expressway, I-78, NJ-495, Franklin D. Roosevelt Drive (FDR Drive), and West Side Highway/Route 9A.

MEASURES TO ASSESS REGIONAL TRAVEL IMPACT

In addition to identifying significant volume changes on key roadways, the following measures will also be analyzed to assess the effects of the CBD Tolling Alternative scenarios on regional travel patterns.

- **VMT:** The NEPA document will analyze the change in vehicle-miles traveled (VMT) per capita across the tolling scenarios and across time. This analysis will determine whether people would drive less under the tolling scenarios. Less driving could indicate a change to higher capacity modes such as transit, high-occupancy vehicles (HOVs), or trip suppression from people choosing not to travel due to increased costs.

The shift to higher capacity modes could be further analyzed through person-volumes on the region's major corridors indicating a shift toward bus and HOV.

Reductions in VMT and increases in person-volumes on roadways could be leading indicators of improved air quality and greater system efficiency.

Regional Transit Analysis

The BPM is an activity-based model that simulates the number and types of journeys made on an average weekday in the region by each resident. Activity-based models such as the BPM use the concept of journeys. A journey is defined as travel between principal and anchor locations such as home, work, or school but the BPM also predicts related trips linked in with the anchor travel (e.g., intermediate stops such as a day care center or a gym). This makes for a more realistic analysis that is based on the various decisions made by travelers between these locations, such as mode, purpose, destination, frequency, and location of intermediate stops, and time of day. The BPM generates over 28.8 million journeys per average weekday day from the New York City region's 8.2 million households.

The potential for effects from the CBD Tolling Alternative scenarios on the regional transit system will be analyzed using the BPM.

For transit modes, the BPM contains all the routes, stations, service frequencies and fares for transit service throughout the metropolitan region, including the following.

- MTA subway, bus, and commuter rail
- New Jersey Transit Corporation (NJ TRANSIT) commuter rail, light rail, and bus
- Port Authority Trans-Hudson (PATH) trains
- Ferries
- Other public buses such as the Bee-Line in Westchester County and Nassau Inter-County Express (NICE) in Nassau County
- Private transit bus operators

The model generates an estimate of demand by access mode (walk or drive) by two major modes—commuter rail and subway—and all other transit.

Using the BPM, the NEPA document will provide an overarching description of notable transit and travel changes. This will include information on changes in mode share and evaluate factors that inform route choices for trips into and out of the Manhattan CBD, as well as trips within and in the vicinity of the Manhattan CBD. The NEPA document will be written in non-technical language to allow the general public to understand how and why trips change in each tolling scenario.

Local Traffic Analysis

The change in regional travel demand is expected to have localized effects on traffic conditions, particularly in areas where there could be increases in traffic based on diversions or new travel patterns associated with the Project. Therefore, the focus of the traffic analysis will be to analyze the potential traffic effects of the Project by identifying those localized areas most likely to experience meaningful increases in traffic volumes.

IDENTIFICATION OF STUDY AREAS—KEY LOCAL INTERSECTIONS

Localized study areas have been established to evaluate key intersections on either side of bridge and tunnel crossings into Manhattan and other locations where there could be a potential traffic impact. The

environmental review will provide a map and detailed inventory of the 102 intersections that comprise the 15 study areas where localized traffic will be evaluated, including:

- East Side around 60th Street, Manhattan
- West Side at 60th Street, Manhattan
- Robert F. Kennedy (RFK) Bridge, the Bronx side
- RFK Bridge, Manhattan side
- Long Island City, Queens including areas around the RFK Bridge and Ed Koch Queensboro Bridge
- Queens-Midtown Tunnel, Queens side
- Queens-Midtown Tunnel, Manhattan side
- Downtown Brooklyn areas around the Brooklyn Bridge and Manhattan Bridge
- Red Hook Brooklyn in the area around the Hugh L. Carey Tunnel
- Downtown Manhattan including the areas around the Hugh L. Carey Tunnel, Brooklyn Bridge, Manhattan Bridge
- West Side Highway/Route 9A (Twelfth Avenue and West 24th Street)
- Midtown Manhattan in the area around the Lincoln Tunnel and Port Authority Bus Terminal
- New Jersey in the area around the Holland Tunnel
- Lower East Side/ China Town/ Two Bridges study area
- Little Dominican Republic study area near George Washington Bridge

Local intersections at the New Jersey approaches to the George Washington Bridge are not included at the intersection level analysis because traffic on the bridge primarily comes from the regional highways instead of the local streets.

IDENTIFICATION OF STUDY AREAS—KEY HIGHWAY SEGMENTS

Based on the initial BPM screening, a traffic count program on key highway segments (e.g., highway crossings into the Manhattan CBD) in both directions will be undertaken, as needed. Current traffic count data from previous studies will be utilized to the maximum extent possible. It is anticipated that the highway segments most likely to be affected would be the approaches to tolled facilities that could experience higher traffic volumes under certain toll credit scenarios. These highway segments are anticipated to include the Gowanus Expressway, Long Island Expressway, the NJ-495 approach to the Lincoln Tunnel, and I-78 approach to the Holland Tunnel. In addition, there may be diversion to the Staten Island Expressway and the Trans-Manhattan/Cross Bronx Expressway because some motorists could take a more circumferential route between Brooklyn/Queens and New Jersey via the Verrazzano-Narrows Bridge or the George Washington Bridge to avoid paying the CBD toll. Following extended examination of the BPM results, additional analyses will be conducted on the FDR Drive, the Bayonne Bridge, the RFK Bridge and a segment of the Eastern Spur in New Jersey, totaling ten highway segments analyzed.

TRAFFIC IMPACT ASSESSMENT

The traffic assessment will be undertaken for the 2023 analysis year to reflect the first year of implementation. For this assessment, existing traffic conditions will first be reviewed and validated reflect existing (2019) conditions. No growth rate will be applied due to the COVID-19 pandemic. Balanced existing

traffic flows will be developed where applicable for the weekday AM, MD, PM, and LN peak hours. Synchro networks will be prepared and calibrated to reflect existing (2019) conditions.

To assess the 2023 No Action Alternative and the 2023 CBD Tolling Alternative scenarios, this analysis will first require adjusting BPM results to assign incremental changes in traffic to specific routes and intersections. In lieu of applying a background growth rate to existing volumes to estimate No Action volumes, a No Action increment from the BPM will be added to existing volumes to develop the No Action volumes. For the No Action Alternative and CBD Tolling Alternative scenarios, the BPM results will be adjusted to account for any deviations between calibrated BPM results and hub-bound traffic counts at up to 10 locations (e.g., vicinity of crossings into the Manhattan CBD) during the four time periods of analysis. BPM adjustments include the following:

- Converting peak-period volumes to peak analysis hour volumes
- Applying capacity constraints at the tunnels and bridges crossing into the Manhattan CBD
- Applying a bounce-back adjustment to account for excessive delays due to the diversion of traffic to alternate routes.

A perceived delay adjustment will also be evaluated to reflect a higher cost for time spent in queue conditions. **Attachment A** summarizes the detailed methodology of applying these adjustment factors to BPM results to determine local traffic volumes.

The future assignments for the CBD Tolling Alternative scenario chosen for analysis will then be added to the existing and No Action volumes and imported into Synchro networks for capacity and delay analysis to determine whether the future CBD Tolling Alternative conditions are likely to cause negative traffic effects. Conceptual traffic mitigation measures will be developed for intersections that may be potentially adversely affected.

A screening assessment will be conducted based on the City Environmental Quality Review (CEQR) screening thresholds for those intersections with a projected net increase of 50 or more vehicles. A secondary screening criterion of an increase of 50 or more vehicles for any movement will also be applied where the net increase in intersection traffic volume is below 50 vehicles.

In addition to the local intersection analysis, the environmental review will also analyze highway corridors most likely to experience the largest increase in traffic volumes under the representative tolling scenario during the four analysis time periods (AM, MD, PM, and LN) described above for the No Action Alternative and CBD Tolling Alternative scenarios. The highway analysis will utilize calibrated Vissim models at the approaches to the Queens-Midtown Tunnel, Hugh L. Carey Tunnel, Holland Tunnel, Lincoln Tunnel, the Verrazzano-Narrows Bridge, and will include merging, diverging, and weaving lane segments as part of the analysis. The FDR Drive and Trans-Manhattan/Cross Bronx Expressway will be analyzed qualitatively due to lack of available data. The Bayonne Bridge, RFK Bridge and New Jersey Turnpike Eastern Spur will be analyzed using Highway Capacity Software (HCS).

MEASURES TO ASSESS TRAFFIC EFFECTS—HIGHWAYS.

Tolling scenarios with the largest increase in local traffic volumes will be analyzed using microsimulation software, the HCS where speeds are 40 mph or greater,² or a qualitative and analytic method depending on the availability of micro-simulation models, pre-COVID-19 pandemic traffic data, existing speeds, and the level of congestion. TBTA, in consultation with NYCDOT and NYSDOT, adopted a preliminary evaluation criteria for determining potential adverse traffic effects along highways as follows:

- At speeds below 20 mph, an increase in traffic volumes of up to 5 percent would not be considered significant.
- At speeds of 20 mph or above, an increase in traffic volumes of up to 10 percent would not be considered significant and thus is appropriate for determining the significance of traffic effects along highways potentially affected by the Project.

Where a detailed traffic analysis is performed using the Vissim model or HCS an additional State Environmental Quality Review Act (SEQRA) criterion will be applied to determine adverse highway effects that relies on an increase in delay of 2.5 minutes or greater. This criterion is derived from an examination of average weekday travel times to the Manhattan CBD from the outer boroughs based on for-hire vehicle (FHV) recorded travel time and distance between passenger pickups and drop-offs prior to the COVID-19 pandemic and during spring 2022 when average travel times rebounded to pre-pandemic levels.

Average travel times to the Manhattan CBD from the outer boroughs during the weekday between 6:00 a.m. and 8:00 p.m. vary from about 35 minutes from Brooklyn, 45 minutes from the Bronx, 45 minutes from Queens, and about 58 minutes from Staten Island. A 2.5-minute increase in travel time under the SEQRA threshold would represent about a 5 percent increase in total travel time, depending on the trip origin, with shorter trips experiencing a higher percentage change and longer trips experiencing a smaller percentage change in travel time. See **Appendix 4B.7, “Transportation: Average Weekday Travel Times to the Manhattan CBD.”**

Because up to a 2.5-minute increase in travel time would not be noticeable to most drivers over the length of the average trip, it is an appropriate threshold for determining adverse traffic effects. This threshold was applied at all locations where a detailed traffic analysis was performed. Where a detailed traffic analysis will not be performed due to the lack of availability of a calibrated Vissim model, or where reliable pre-COVID-19 traffic data are not available, the following SEQRA criteria will be used to determine adverse effects: an increase in traffic volumes greater than 5 percent at speeds of less than 20 mph, or an increase in traffic volumes greater than 10 percent at speeds of 20 mph or higher.

² The Highway Capacity Software (HCS) is a macroscopic traffic simulation software that implements the methodology in the Highway Capacity Manual (HCM) 6th Edition. This tool is useful when speeds are generally 40 mph or higher. It provides level of service (LOS), speed, and density as measures of performance. At LOS F, this software does not provide useful output and, therefore, cannot be used effectively under congested conditions.

Measures to Assess Traffic Effects—Intersections. Intersection level of service (LOS) is typically based on the average delay per vehicle, either for the intersection as a whole or for specific lane groups (e.g., westbound left-turn lane). The analysis methodology and impact threshold guidance will be based on the SEQRA standards. In accordance with the SEQRA guidelines adopted by TBTA for the determination of adverse traffic effects at signalized intersections, an increase in delay for any intersection during the peak hour of greater than 5 seconds at LOS E or F is considered an adverse traffic effect requiring mitigation.

These traffic analyses will be conducted using Synchro and all Synchro inputs and outputs will be shared with NYCDOT technical reviewers and will be included in the environmental document. All traffic intersection analyses will be evaluated for the incremental change in volume and LOS between the No Action Alternative and CBD Tolling Alternative conditions consistent with the applicable SEQRA guidance.

PARKING ANALYSES

The enabling legislation requires NYCDOT to prepare a parking study 18 months after implementation of the program.

The BPM has shown an overall reduction in vehicle trips to the Manhattan CBD as a result of the CBD Tolling Alternative in all tolling scenarios. The decrease in vehicle trips would also result in a decrease in parking demand in the Manhattan CBD. Consequently, the CBD Tolling Alternative would not create a parking shortfall in the Manhattan CBD, and a detailed assessment of the effects of the CBD Tolling Alternative on parking supply and demand in the Manhattan CBD is not necessary.

With the CBD Tolling Alternative, the number of commuters and visitors to the Manhattan CBD who would use transit for their trip would increase. Some of these commuters and visitors would drive to commuter rail and subway stations outside the Manhattan CBD to access transit to complete their trip. Consequently, the CBD Tolling Alternative would increase the number of drivers who would seek parking near commuter rail and subway stations outside the Manhattan CBD. These commuters and visitors would create demand for on- and off-street parking near the commuter rail and subway stations they use for their trip to the Manhattan CBD.

The NEPA document will assess the future effects of the Project on parking in the outer boroughs. The proposed methodology will determine baseline supply and utilization in areas up to 1/4-mile from the subway stations or transit hubs where “park & ride” auto to transit demand resulting from toll avoidance is expected to be the greatest. Based upon results from the model, the incremental parking demand will be added to the future baseline (No Action Alternative) levels to determine whether the shift in travel patterns would result in the potential for parking shortfalls within the outer borough study area.

This assessment of parking conditions outside the Manhattan CBD relies upon estimates of transit usage produced by the BPM for the Project.

The parking assessment is being conducted using the methodologies outlined in the City of New York's 2020 *City Environmental Quality Review (CEQR Technical Manual)*, which recommends a screening procedure to determine whether quantified analyses of transportation conditions are warranted.³ Using that screening approach, if a project would result in 50 or more peak-hour vehicle trips at an intersection, then further analyses might be warranted to assess the potential for adverse effects on parking. For locations that would experience an increase of fewer than 50 peak-hour vehicle trips due to a project, further analysis of parking is typically not warranted.

The socioeconomic section of the NEPA document will qualitatively examine broader effects of the shifts in parking demand including changes to the demand for off-street parking. It will also look at the potential for new cost differentials to emerge such as increases or decreases in parking costs based on changes to demand.

DATA COLLECTED AS PART OF THE NEPA ANALYSIS

The NEPA transportation and traffic analyses are built on an extensive baseline of data collected in June 2019, with additional data collection that occurred in fall 2019. The combination of assembled existing data obtained from NYCDOT and available public documents with the newly collected data ensures that the analyses are built on a well-supported existing conditions baseline. The data collection, calibration and balancing of intersection traffic and pedestrian volumes was done in coordination with NYCDOT and is consistent with the *CEQR Technical Manual* guidance. For broader calibration of BPM volumes and traffic count data for Manhattan CBD crossings, the collected and modeled data was correlated with the NYMTC *Hub Bound Travel Data Report 2019*. The NEPA document will summarize the data collection effort (location, dates, time periods collected) and the original data collection will be shared with NYCDOT and other agencies as part of the environmental record.

THIRD-PARTY DATA SOURCES

The transportation and traffic analysis will utilize third-party data provided by StreetLight Data, Inc. These data are being used to further define trip origin and destination to inform how to assign traffic on the local road network. The data provided by StreetLight Data, Inc. does not require further calibration with existing traffic counts. The NEPA document will include details about the source material and describe its use as part of the traffic assessment.

³ While the MTA Reform and Traffic Mobility Act exempts the Project from the environmental review procedures of CEQR, the methodology of the *CEQR Technical Manual* was used for this analysis because it provides a widely accepted methodology for conducting a parking assessment in New York City.

Attachment A. Methodology to Develop Local Traffic Volumes

A.1. HOURLY FACILITY TRAFFIC VOLUMES

This section describes the method used to develop hourly traffic volumes for existing, 2023 No Action Alternative, and 2023 CBD Tolling Alternative conditions.

A.1.1. *Existing Traffic Volumes*

Existing hourly facility traffic volumes are available for all Manhattan CBD crossings based on transaction data at TBTA tolled facilities for the Hugh L. Carey Tunnel, the Queens–Midtown Tunnel, and the RFK Bridge. Port Authority of New York and New Jersey trans-Hudson transaction data are available for 2018 inbound (to Manhattan) traffic and 2017 outbound (exiting Manhattan) traffic. NYCDOT toll-free bridge counts are available in the *Hub Bound Travel Data Report 2019*. Counts were recently taken in June 2019 at the 60th Street exit from the Manhattan CBD. A 0.5 percent annual background growth rate was applied to the pre-2019 traffic data to estimate the existing 2019 traffic volumes. This growth rate is twice the growth rate suggested in the *CEQR Technical Manual* to account for some additional traffic generated by local development projects.

A.1.2. *2023 No Action Alternative Traffic Volumes*

The 2023 No Action Alternative increment traffic volumes were derived by distributing the adjusted peak-period increment traffic volumes from the No Action Alternative BPM facilities to each hour of the day. The No Action Alternative BPM increment is the difference between the 2023 No Action Alternative BPM and the calibrated existing conditions BPM. The peak-period traffic volumes were distributed to individual hours using the same temporal distribution as the existing facility counts. The No Action Alternative BPM reflects roadway network changes expected to be in place by 2023 including the Brooklyn Bridge bike lanes, Queensboro Bridge bike lanes, and Brooklyn-Queens Expressway lane reduction. No additional background growth rates were applied since the existing volumes and BPM baseline represent pre-pandemic volumes that are not yet fully recovered and are expected to remain flat within the framework of the 2023 No Action Alternative analysis year.⁴

A.1.3. *2023 CBD Tolling Alternative Increment Hourly Traffic Volumes*

The 2023 CBD Tolling Alternative increment traffic volumes were derived by distributing the adjusted peak-period increment traffic volumes from the CBD Tolling Alternative BPM facilities to each hour of the day. The 2023 CBD Tolling Alternative increment is the difference between the 2023 CBD Tolling Alternative BPM and the 2023 No Action Alternative BPM. The peak-period traffic volumes were distributed to individual hours using the same temporal distribution as the existing facility counts.

⁴ Traffic counts on local streets and NYCDOT bridges in the Manhattan CBD in May 2021 and May 2022 indicate that traffic volumes are at 85 percent to 90 percent of pre-COVID-19 pandemic traffic levels, although traffic volumes on TBTA and PANYNJ facilities have nearly recovered to pre-pandemic levels.

A.1.4. 2023 CBD Tolling Alternative Total Hourly Traffic Volumes

Both the 2023 No Action Alternative and CBD Tolling Alternative hourly traffic volumes were derived by adding the appropriate hourly increment to the preceding analysis (No Action Alternative is added to existing conditions, CBD Tolling Alternative is added to the No Action Alternative) hourly volumes and then subtracting or adding the hourly “bounce-back” traffic volumes. A facility that is projected to have a large incremental increase could see the increment decrease slightly due to volume (traffic) diverting to a facility with more available capacity, which would result in a smaller positive increment. A facility that is projected to have a large incremental decrease could see the increment increase slightly due to volume diverting from a facility with less available capacity, resulting in a smaller negative increment. The bounce-back methodology is further detailed in the section below.

A.2. ADJUSTMENT OF PROJECTED CHANGES IN BPM PERIOD FACILITY VOLUMES

Figure A-1 presents a flow chart describing the adjustment of projected changes in peak-period facility volumes as projected by the BPM. These steps are summarized below. This process is followed when establishing both the No Action Alternative and CBD Tolling Alternative increments, with the only differences between the following:

- The No Action Alternative calibration factor is based on the difference between the *Hub Bound Travel Data Report 2019* and the existing BPM, while the CBD Tolling Alternative calibration factor is based on the difference between the *Hub Bound Travel Data Report 2019* and the No Action Alternative BPM.
- The No Action Alternative increment is based on the initial difference between the existing and No Action Alternative BPM results, while the CBD Tolling Alternative increment is based on the initial difference between the No Action Alternative and CBD Tolling Alternative BPM results.

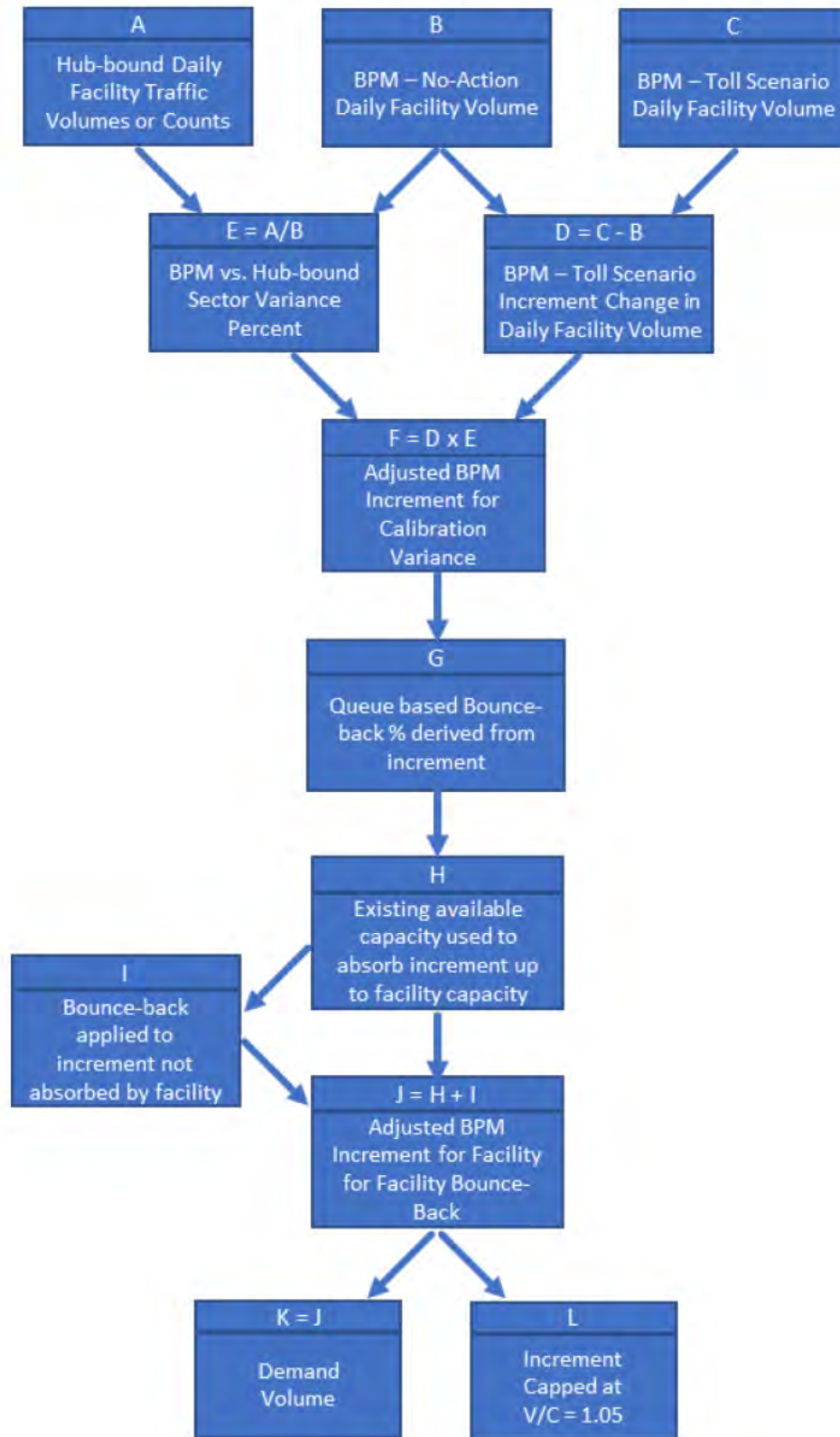
A.2.1. Adjustment for Calibration Variance at Each Facility

The period increment between the modeled BPM facility volume and the hub-bound⁵ or count volume represents an under or over assignment of facility traffic. This over-under assignment of facility volumes needs to be accounted for and an adjustment needs to be made to the initial changes in facility volumes projected by the BPM. The proposed increment, whether positive or negative has an impact on the necessary adjustment. There are four possible scenarios based on these relationships of the BPM assignment and the proposed BPM increment. The table below breaks down each possible scenario.

⁵ Hub-bound refers to travel to the Manhattan CBD tolling area and is a term used by NYMTC. The geographic coverage of the Hub and the Manhattan CBD tolling area are the same.

Appendix 4B.1, Transportation: Transportation and Traffic Methodology for NEPA Evaluation (Attachment A)

Scenarios	<u>A</u> BPM Percent Difference (Over/Under Assigned)	<u>B</u> BPM Increment (Positive/Negative)	<u>C</u> Adjusted BPM Increment	<u>Reason</u>
Scenario 1	Over Assigned (+)	Positive (+)	Positive (+) [Absolute Increase]	The real facility has less traffic (more available capacity) than it does in the BPM, so it could attract more trips.
Scenario 2	Over Assigned (+)	Negative (-)	Negative (-) [Absolute Decrease]	The real facility has less traffic than it does in the BPM. There is less traffic to lose so it could lose fewer trips.
Scenario 3	Under Assigned (-)	Positive (+)	Positive (+) [Absolute Decrease]	The real facility has more traffic (less available capacity) than it does in the BPM, so it could attract fewer trips.
Scenario 4	Under Assigned (-)	Negative (-)	Negative (-) [Absolute Increase]	The real facility has more traffic than it does in the BPM. There is more traffic to lose so it could lose more trips.

Figure A-1 Adjustment of Period Best Practice Model Changes in Facility Volumes⁶

A.2.2. Adjustment for Sector Calibration Variance

The period BPM sector volumes are generally consistent with the hub-bound sector volumes; however, there is a need to adjust for some over or under assignment of traffic. Sectors are defined regions within BPM, generally broken down by New York City borough. For instance, if the BPM period sector traffic volume is over-assigned by 5 percent, then it is assumed that the diverted traffic would also be about 5 percent too high. Therefore, in Step 2, a 5 percent reduction is applied to the Step 1 adjusted increase in BPM facility volume to account for the over assignment in period BPM sector volumes. Similarly, if the assigned sector volumes are 5 percent too low, then the Step 1 adjusted BPM change in facility volumes must be increased to account for the under assignment of sector traffic volumes.

A.2.3. Bounce-back Hourly Facility Traffic Volumes

Unlike a network simulation model, the BPM as a travel demand model relies on a conventional static assignment method in TransCAD for the loading of origin-destination demand to the links of the highway network. While it does consider capacity constraints at the Manhattan CBD crossings and all links in the network, over congestion is expressed as simple link-level v/c ratios, which are used to calculate travel time delays on each link. Therefore, post assignment analysis of the hourly traffic volumes can yield more realistic estimates of traffic flow characteristics particularly on the arterial system and at intersections. For specific segments and links utilized in the traffic study the distribution of adjusted period BPM flow increments may result in traffic volumes that cannot be accommodated resulting in excessive delays which may result in a bounce-back of traffic from the alternate facility to the original facility. The premise of this portion of the methodology is to determine how a system equilibrium would look following the implementation of any of the CBD Tolling Alternative scenarios.

The No Action Alternative delay and the CBD Tolling Alternative delay are calculated based on estimated queue length. Estimated queue length is determined by converting the additional volume from the No Action Alternative to CBD Tolling Alternative scenarios into a queue length by assuming 20 feet per vehicle. The additional queue is only considered if the v/c ratio is greater than 1.0. Based on the estimated increase in queue, a delay function, using a congested speed of about 6.5 mph, calculates a projected delay for each vehicle. This delay value is then multiplied by a perceived delay factor of 1.5 which is used to reflect a higher perceived cost for time spent in queue conditions. This factor is supported via several studies that detail how a traveler perceives delay as taking longer than it may take realistically. A delay cost is calculated by multiplying the new delay factor by a \$35 per hour value of time. Based on the delay cost, using the bounce-back curve shown in **Figure A-2**, the percent bounce-back is determined for the hourly increment. Any additional increment over the capacity of the facility is subject to this bounce-back percentage. The volume that is “bounced” returns to the facility it was likely to have originally used under existing conditions. **Table A-1** and **Table A-2** show the method of calculating the hourly bounce-back traffic volumes.

⁶ Variance adjustments are based on the ratio of Hub-bound volumes vs. BPM assigned volumes and were applied by four sectors as described below: New Jersey sector for the George Washington Bridge, Lincoln Tunnel, and Holland Tunnel; Brooklyn sector for Hugh L. Carey T, Brooklyn Bridge, and Manhattan Bridge; Queens sector for Williamsburg Bridge, Queens Midtown Tunnel, Queensboro Bridge, and RFK Bridge; 60th Street Sector for Route 9A, west side avenues, east side avenues, and the FDR Drive

Table A-1. Hourly Existing, No Action Alternative and CBD Tolling Alternative Facility Volumes (Hugh L. Carey Tunnel Manhattan-bound Example)

Hour Starting	Existing Inbound - May 2019					No Action Inbound - May 2021					2021 Base Action Increment					Bounceback					Adjusted Increment w/Bounceback					TOTAL 2021 Action Inbound Traffic Volume				
	Cars		Trucks		Total	Cars		Trucks		Total	Cars		Trucks		Total	Cars		Trucks		Total	Cars		Trucks		Total	Cars		Trucks		Total
	TBM	E-ZPass	TBM	E-ZPass		TBM	E-ZPass	TBM	E-ZPass		TBM	E-ZPass	TBM	E-ZPass		TBM	E-ZPass	TBM	E-ZPass		TBM	E-ZPass	TBM	E-ZPass		TBM	E-ZPass	TBM	E-ZPass	
12:00 AM	6	108	0	15	129	6	113	0	16	135	7	120	0	17	144	0	0	0	0	0	7	120	0	17	144	13	233	0	32	279
1:00 AM	3	55	0	7	65	3	58	0	7	68	3	61	0	8	72	0	0	0	0	0	3	61	0	8	72	6	119	0	15	140
2:00 AM	2	33	0	6	41	2	35	0	6	43	2	37	0	7	46	0	0	0	0	0	2	37	0	7	46	4	71	0	13	89
3:00 AM	1	38	0	6	45	1	40	0	6	47	1	42	0	7	50	0	0	0	0	0	1	42	0	7	50	2	82	0	13	97
4:00 AM	3	116	0	18	137	3	121	0	19	143	3	129	0	20	152	0	0	0	0	0	3	129	0	20	152	6	250	0	39	296
5:00 AM	17	785	2	97	901	18	821	2	101	942	19	874	2	108	1,003	0	0	0	0	0	19	874	2	108	1,003	37	1,695	4	209	1,945
6:00 AM	40	1,722	4	191	1,957	46	1,960	5	217	2,228	13	575	1	64	653	-11	-488	-1	-54	-555	2	87	0	10	99	48	2,047	5	227	2,326
7:00 AM	37	1,919	2	235	2,193	40	2,117	2	256	2,416	12	621	1	75	708	-11	-596	-1	-72	-680	0	25	0	3	28	41	2,142	2	259	2,444
8:00 AM	37	1,735	2	201	1,975	42	1,983	2	229	2,256	12	582	1	67	662	-11	-519	-1	-60	-591	1	62	0	7	71	43	2,045	2	236	2,327
9:00 AM	35	1,612	2	142	1,791	40	1,835	2	162	2,039	12	538	1	47	598	-6	-291	0	-26	-324	5	247	0	22	274	45	2,081	3	183	2,313
10:00 AM	48	1,812	4	126	1,990	56	2,115	5	147	2,322	18	684	2	48	751	-17	-657	-1	-46	-721	1	27	0	2	30	57	2,142	5	149	2,352
11:00 AM	46	1,538	3	104	1,691	56	1,861	4	126	2,046	18	602	1	41	662	-11	-357	-1	-24	-393	7	245	0	17	269	63	2,105	4	142	2,315
12:00 PM	43	1,431	2	93	1,569	52	1,731	2	113	1,898	17	560	1	36	614	-6	-186	0	-12	-204	11	374	1	24	410	63	2,105	3	137	2,308
1:00 PM	45	1,351	2	108	1,506	54	1,634	2	131	1,822	18	528	1	42	589	-3	-96	0	-8	-107	14	432	1	35	482	69	2,067	3	165	2,304
2:00 PM	49	1,388	2	121	1,560	59	1,679	2	146	1,887	19	543	1	47	610	-6	-169	0	-15	-190	13	374	1	33	420	73	2,053	3	179	2,307
3:00 PM	53	1,408	2	132	1,595	64	1,703	2	160	1,930	21	551	1	52	624	-8	-216	0	-20	-244	13	335	0	31	379	77	2,038	3	191	2,309
4:00 PM	40	1,137	1	152	1,330	42	1,201	1	161	1,405	43	1,217	1	163	1,424	-41	-1,173	-1	-157	-1,372	2	44	0	6	51	44	1,245	1	166	1,456
5:00 PM	32	1,023	1	144	1,200	35	1,104	1	155	1,295	35	1,118	1	157	1,312	-34	-1,078	-1	-152	-1,265	1	40	0	6	47	36	1,144	1	161	1,342
6:00 PM	30	1,043	1	134	1,208	32	1,126	1	145	1,304	33	1,141	1	147	1,321	-32	-1,100	-1	-141	-1,274	1	41	0	5	47	34	1,167	1	150	1,351
7:00 PM	40	1,112	1	76	1,229	43	1,208	1	83	1,335	44	1,224	1	84	1,353	-42	-1,180	-1	-81	-1,304	2	44	0	3	49	45	1,252	1	86	1,384
8:00 PM	30	783	0	40	853	31	819	0	42	892	33	871	0	45	949	0	0	0	0	0	33	871	0	45	949	65	1,690	0	86	1,841
9:00 PM	32	702	0	36	770	34	734	0	38	805	36	781	0	40	857	0	0	0	0	0	36	781	0	40	857	69	1,515	0	78	1,662
10:00 PM	26	626	0	31	683	27	655	0	32	714	29	697	0	35	760	0	0	0	0	0	29	697	0	35	760	56	1,352	0	67	1,475
11:00 PM	16	348	0	21	385	17	364	0	22	403	18	387	0	23	429	0	0	0	0	0	18	387	0	23	429	35	751	0	45	831
AM Peak TOTAL	149	6,989	10	769	7,916	168	7,895	11	864	8,938	49	2,315	3	253	2,621	-40	-1,895	-3	-212	-2,149	9	421	1	42	472	177	8,315	12	905	9,410
PM Peak TOTAL	142	4,315	4	506	4,967	153	4,639	4	543	5,339	155	4,700	4	550	5,409	-149	-4,531	-4	-530	-5,215	6	169	0	20	195	158	4,808	4	563	5,533
Off-Peak TOTAL	420	12,522	17	961	13,920	484	14,482	20	1,112	16,097	262	7,467	8	574	8,311	-51	-1,681	-3	-125	-1,859	211	5,786	5	449	6,451	694	20,268	25	1,561	22,549
Daily TOTAL	711	23,826	31	2,236	26,803	804	27,015	36	2,519	30,374	465	14,482	16	1,378	16,341	-240	-8,106	-10	-867	-9,223	225	6,376	6	511	7,118	1,030	33,391	41	3,030	37,492
Vehicle TOTAL	24,537		2,266		26,803	27,819		2,554		30,374	14,948		1,394		16,341	-8,346		-877		-9,223	6,601		517		7,118	34,421		3,071		37,492
Facility TOTAL	26,803					30,374					16,341					-9,223					7,118					37,492				

Appendix 4B.1, Transportation: Transportation and Traffic Methodology for NEPA Evaluation (Attachment A)

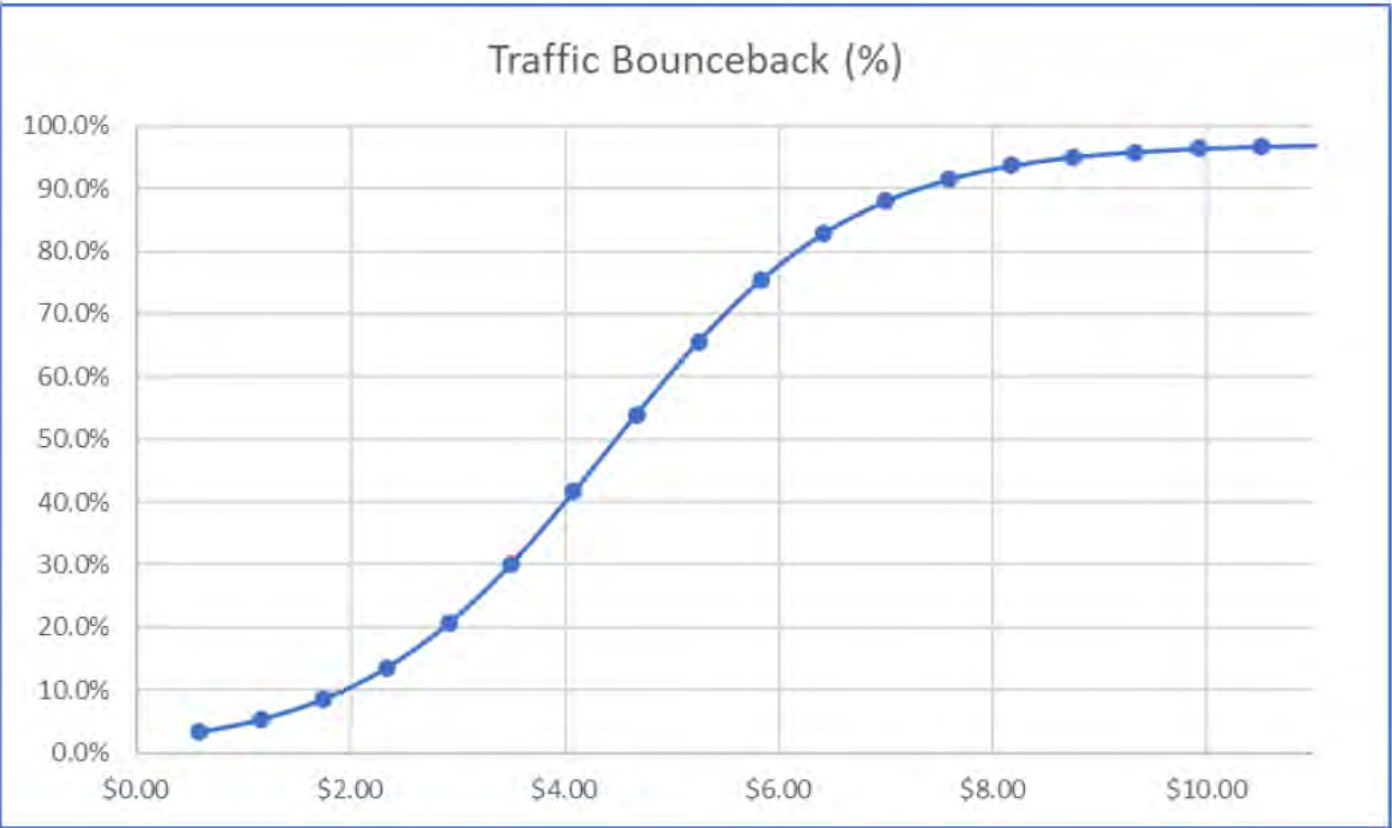
Table A-2. Percentage Bounce-Back by Hour— (Hugh L. Carey Tunnel Manhattan-bound Example)

												Approach Lanes		Congested Speed	Uncongested Speed			VOT/Min	Excessive Delay Multiplier
1,150												2		8.82 9.4	51.45			\$0.58	1.50
Hour Starting	Number of GP Lanes	Capacity Per GP Lane	HOV Volume Removed	Total Vehicular Capacity in GP	Existing Volume (PCE)	No Action Volume (PCE)	Action Volume (PCE)	Delta Volume	No Action V/C	Action V/C w/o Bounce-Back	No Action Queue	Action Queue w/o Bounce-Back	Net Queue w/o Bounce-Back (ft)	Estimated Delay (min)	Perceived Delay	DelayCost	Bounce-Back (percent)*	Capped Bounce Back (percent)*	
12:00 AM	2	1,150		2,300	144	151	311	160	0.065	0.135	0	0	0	0	0.0	\$-	2.54%	0.0%	
1:00 AM	2	1,150		2,300	72	75	155	80	0.033	0.068	0	0	0	0	0.0	\$-	2.54%	0.0%	
2:00 AM	2	1,150		2,300	47	49	102	52	0.021	0.044	0	0	0	0	0.0	\$-	2.54%	0.0%	
3:00 AM	2	1,150		2,300	51	53	110	57	0.023	0.048	0	0	0	0	0.0	\$-	2.54%	0.0%	
4:00 AM	2	1,150		2,300	155	162	334	172	0.070	0.145	0	0	0	0	0.0	\$-	2.54%	0.0%	
5:00 AM	2	1,150		2,300	1,000	1046	2159	1113	0.455	0.938	0	0	0	0	0.0	\$-	2.54%	0.0%	
6:00 AM	2	1,150	751	2,300	2,151	2450	3168	718	1.065	1.377	2981	10164	7183	11	16.9	\$9.84	95.51%	95.5%	
7:00 AM	2	1,150	913	2,300	2,430	2674	3458	784	1.163	1.503	2436	10277	7841	12	18.4	\$10.74	95.98%	96.0%	
8:00 AM	2	1,150	985	2,300	2,178	2487	3217	729	1.081	1.399	3095	10389	7294	11	17.1	\$9.99	95.62%	95.6%	
9:00 AM	2	1,150	859	2,300	1,935	2202	2848	646	0.958	1.238	0	9134	9134	14	21.5	\$12.51	96.30%	96.3%	
10:00 AM	2	1,150		2,300	2,120	2474	3274	800	1.076	1.423	3540	11538	7998	13	18.8	\$10.96	96.05%	96.0%	
11:00 AM	2	1,150		2,300	1,798	2175	2879	703	0.946	1.252	0	10806	10806	17	25.4	\$14.80	96.38%	96.4%	
12:00 PM	2	1,150		2,300	1,664	2013	2664	651	0.875	1.158	0	9999	9999	16	23.5	\$13.70	96.36%	96.4%	
1:00 PM	2	1,150		2,300	1,616	1955	2587	632	0.850	1.125	0	9712	9712	15	22.8	\$13.31	96.35%	96.3%	
2:00 PM	2	1,150		2,300	1,683	2036	2694	658	0.885	1.171	0	10114	10114	16	23.8	\$13.86	96.37%	96.4%	
3:00 PM	2	1,150		2,300	1,729	2092	2768	676	0.909	1.203	0	10389	10389	16	24.4	\$14.23	96.38%	96.4%	
4:00 PM	1	1,150		1,150	1,483	1566	3154	1587	1.362	2.742	835	16708	15873	25	37.3	\$21.75	96.40%	96.4%	
5:00 PM	1	1,150		1,150	1,345	1451	2921	1470	1.262	2.540	1061	15764	14703	23	34.5	\$20.14	96.40%	96.4%	
6:00 PM	1	1,150		1,150	1,343	1449	2918	1469	1.260	2.537	1065	15751	14686	23	34.5	\$20.12	96.40%	96.4%	
7:00 PM	1	1,150		1,150	1,306	1419	2857	1438	1.234	2.484	1130	15508	14378	23	33.8	\$19.70	96.40%	96.4%	
8:00 PM	2	1,150		2,300	893	934	1928	994	0.406	0.838	0	0	0	0	0.0	\$-	2.54%	0.0%	
9:00 PM	2	1,150		2,300	806	843	1740	897	0.366	0.756	0	0	0	0	0.0	\$-	2.54%	0.0%	
10:00 PM	2	1,150		2,300	714	747	1541	795	0.325	0.670	0	0	0	0	0.0	\$-	2.54%	0.0%	
11:00 PM	2	1,150		2,300	406	425	877	452	0.185	0.381	0	0	0	0	0.0	\$-	2.54%	0.0%	
Facility TOTAL				PCE	29,069	32,928	50,663							*Bounce-back is only applied after a facility is over capacity					

Figure A-2 Bounce-Back Curve (Percentage Bounce-Back versus Anticipated Cost of Delay)

		Xo	Midpoint	4.412204
VOT/Hour	\$35.00	L	Max Value	0.9712914
VOT/Min	\$0.58	K	Growth Rate	0.8755966
			Exponential value	2.7182818

Perceived Delay Factor 1					
Delay (min)	Perceived Delay (min)	Delay Cost	Target Bounceback	Bounceback Curve	Variance
1	1.00	\$0.58	3.0%	3.3%	0.28%
2	2.00	\$1.17	5.0%	5.4%	0.35%
3	3.00	\$1.75	8.0%	8.6%	0.60%
4	4.00	\$2.33	10.0%	13.5%	3.54%
5	5.00	\$2.92	20.0%	20.6%	0.65%
6	6.00	\$3.50	30.0%	30.1%	0.14%
7	7.00	\$4.08	40.0%	41.6%	1.62%
8	8.00	\$4.67	50.0%	54.0%	3.95%
9	9.00	\$5.25	70.0%	65.6%	-4.38%
10	10.00	\$5.83	75.0%	75.4%	0.40%
11	11.00	\$6.42	85.0%	82.8%	-2.19%
12	12.00	\$7.00	88.0%	88.0%	0.00%
13	13.00	\$7.58	90.0%	91.4%	1.44%
14	14.00	\$8.17	94.0%	93.6%	-0.37%
15	15.00	\$8.75	95.0%	95.0%	0.00%
16	16.00	\$9.33	96.0%	95.8%	-0.16%
17	17.00	\$9.92	97.0%	96.4%	-0.65%
18	18.00	\$10.50	97.0%	96.7%	-0.34%
19	19.00	\$11.08	97.0%	96.8%	-0.15%
20	20.00	\$11.67	98.0%	97.0%	-1.04%
21	21.00	\$12.25	98.0%	97.0%	-0.97%
22	22.00	\$12.83	98.0%	97.1%	-0.93%
23	23.00	\$13.42	98.0%	97.1%	-0.91%
24	24.00	\$14.00	98.0%	97.1%	-0.89%



A.2.4. Capping Processed Traffic Volumes

The final step of the adjustment process deals with capping the processed increment based upon the capacity of the facility. The final incremental demand is split into two categories: demand volume and processed (capped) volume. The demand volume is the total number of vehicles that are committed to using a facility. Based on the magnitude of this volume, it is possible that the entire demand cannot be processed by the facility. As a result, a lower processed volume will emerge downstream of the facility. The processing ability of a facility is set to 105 percent of the facility capacity, a standard value used in traffic analysis. This demand volume is used in analysis of locations upstream of, or before entering, a facility. The processed volume is used in analysis of locations downstream of, or after exiting, a facility. **Table A-3** details the entire adjustment process that the period increment undergoes, prior to any capping.

A.3. INTERSECTION ASSIGNMENT

After the BPM results are normalized at each crossing facility, the hourly increment between the No Action Alternative and CBD Tolling Alternative facility volumes were distributed to the study locations for each analysis hour based on StreetLight Data, Inc. GPS travel data. The distribution was performed separately for inbound traffic (entering Manhattan), outbound traffic (exiting Manhattan), non-Manhattan locations, and Manhattan locations. These distributions were then combined to calculate the total traffic increment at each study location. The process is described below and illustrated in **Figure A-3**.

A.3.1. Inbound Assignment

NON-MANHATTAN

The percentage of facility trips that pass through each non-Manhattan intersection destined to a facility crossing during each peak period is calculated from data provided by StreetLight Data, Inc. This percentage is applied to the facility Action increment to calculate the inbound increment by facility for each intersection. After the facility increments are calculated they were added together to derive the total inbound increment for each non-Manhattan intersection location.

MANHATTAN CBD

The percentage of facility trips that pass through each Manhattan intersection originating at a facility crossing during each peak period was calculated from data provided by StreetLight Data, Inc. This percentage was applied to the facility Action increment to calculate the inbound increment by facility for each location. After the facility increments were calculated they were added together to derive the total inbound increment for each Manhattan intersection location.

A.3.2. Outbound Assignment

MANHATTAN CBD

The percentage of facility trips that pass through each Manhattan intersection destined to a facility crossing during each peak period was calculated from data provided by StreetLight Data, Inc. This percentage was applied to the facility Action increment to calculate the outbound increment by facility for each intersection. After the facility increments were calculated they were added together to derive the total outbound increment for each Manhattan location.

NON-MANHATTAN

The percentage of facility trips that pass through each non-Manhattan intersection originating at a facility crossing during each peak period was calculated from data provided by StreetLight Data, Inc. This percentage was applied to the facility Action increment to calculate the outbound increment by facility for each location. After the facility increments were calculated they were added together to derive the total outbound increment for each non-Manhattan intersection location.

A.3.3. Northern Manhattan (Non-Manhattan CBD) Assignment

The normalized volume entering the Manhattan CBD at 60th Street was assigned as southbound traffic at Manhattan intersection locations in the Upper East and Upper West study areas while the normalized volume exiting the Manhattan CBD at 60th Street were assigned as northbound traffic at Manhattan intersection locations in the Upper East and Upper West study areas.

Table A-3 Inbound Adjustment of Projected Best Practice Model AM Period Changes in Facility Volumes

FACILITY	Δ BPM No Build - Existing Counts	A Percent Difference	B BPM Scenario Increment	C=B*(1-A) or C=B*(1+A) Adjusted BPM Increment	D Sector Adjustment	E Value of Time Adjustment	F = C x D x E Adjusted 6AM - 10AM	G Bounceback Loss	H Bounceback Gain	Bounce-Back To	I = F + G + H Total Facility Increment
Queensboro Bridge (Lower)	4,584	75%	(3,922)	(985)	0.826	1.000	(814)	0	1,115	50% QMT and 50% RFK	301
Queensboro Bridge (Upper NR)	1,082	16%	(2,562)	(2,140)	0.826	1.000	(1,767)	0	0	100% RFKM	(1,767)
Queensboro Bridge (Upper SR)	797	(2%)	(2,058)	(2,101)	0.826	1.000	(1,735)	0	710	100% RFKM	(1,025)
Queens-Midtown Tunnel	337	3%	4,146	4,253	0.826	1.000	3,512	(2,787)	0	40% QBB LL, 15% WBB, 10% BB, 10% MB, 25% QBB UL	725
Hugh L. Carey Tunnel	1,484	13%	2,598	2,944	0.890	1.000	2,621	(2,149)	0	20% WBB, 60% MB, and 20% BB	472
Holland Tunnel	606	6%	(356)	(336)	0.960	1.000	(323)	0	0	50% VNB and 50% GWB	(322)
Lincoln Tunnel	521	3%	(383)	(371)	0.960	1.000	(356)	0	0	100% LT	(356)
RFK Bridge - Manhattan	(2,184)	(19%)	961	777	0.642	1.000	499	(21)	0	60% QBB UL, 40% RFKM	477
Williamsburg Bridge	280	3%	(1,597)	(1,552)	0.890	1.000	(1,382)	0	848	35% QMT, 50% BB and 15% MB	(534)
Manhattan Bridge	6,311	59%	(10,331)	(4,281)	0.890	1.000	(3,812)	0	1,568	20% HCT, 40% WBB and 40% BB	(2,244)
Brooklyn Bridge	(2,320)	(16%)	(1,294)	(1,496)	0.890	1.000	(1,332)	0	709	20% HCT, 40% MB and 40% WB	(624)
George Washington Bridge	7,865	21%	(665)	(526)	0.960	1.000	(505)	0	0	50% HT and 50% LT	(505)
Henry Hudson Bridge	5,184	118%	(448)	81	0.458	1.000	37	0	0	100% RFKM	37
Verrazzano-Narrows Bridge	20,993	135%	(224)	80	0.425	1.000	34	(0)	0	50% HT and 50% LT	33
60th St Crossings	5,579	9%	(13,532)	(12,358)	0.920	1.000	(11,371)	0	9	-	(11,363)

Figure A-3 Traffic Assignment to Specific Intersections

Figure A-4 Example of Traffic Assignment Methodology

FACILITY SOURCE	OUTBOUND (AWAY FROM CBD)				INBOUND (TOWARDS CBD)			
	% OF INCREMENT	TOTAL INCREMENT	ASSIGNED INCREMENT	ASSIGNED TO MOVEMENT(S)	% OF INCREMENT	TOTAL INCREMENT	ASSIGNED INCREMENT	ASSIGNED TO MOVEMENT(S)
George Washington Bridge	0.1%	342	1	N/A	1.9%	-115	-2	SBT
Holland Tunnel	7.5%	-294	-22	NBT	12.1%	-85	-10	SBT
Lincoln Tunnel	0.8%	-171	-1	N/A	3.3%	-120	-4	SBT
Verrazano-Narrows Bridge	54.3%	5	2	N/A	-	-	0	N/A
Brooklyn Bridge	8.8%	196	17	SBT, WBL	1.5%	-356	-5	NBT, NBR
Hugh L. Carey Tunnel	97.6%	187	182	NBR	87.4%	324	283	WBL, WBR
Manhattan Bridge	0.9%	-201	-2	N/A	0.4%	-897	-3	SBT
Queensboro (59th Street) Bridge - Upper Level	0.0%	0	0	N/A	1.1%	4	0	NBT, NBR
Queensboro (59th Street) Bridge - Lower Level	0.1%	-499	0	N/A	1.1%	50	1	NBT, NBR
Queens Midtown Tunnel	0.5%	3	0	N/A	2.8%	106	3	NBT, NBR
Robert F. Kennedy (Triborough) Bridge	0.5%	474	2	N/A	2.0%	0	0	NBT, NBR
Williamsburg Bridge	1.0%	-172	-2	N/A	0.7%	12	0	SBT
11th Ave	7.9%	-70	-6	NBT	7.9%	-120	-9	SBT
10th Ave	2.6%	-200	-5	NBT	-	-	0	SBT
9th Ave	-	-	0	N/A	5.1%	-208	-11	SBT
Broadway	1.1%	0	0	NBT	1.1%	-157	-2	SBT
Queensboro Bridge Exit	3.1%	-161	-5	SBT, WBL	-	-	0	SBT
3rd Ave	0.4%	-252	-1	N/A	-	-	0	SBT
York Ave	5.9%	0	0	SBT, WBL	5.9%	-98	-6	SBT
2nd Ave	-	-	0	N/A	0.5%	-218	-1	SBT
1st Ave	3.3%	-283	-9	SBT, WBL	-	-	0	SBT
Lexington Ave	-	-	0	N/A	0.7%	-208	-1	SBT
Park Ave	0.4%	-161	-1	N/A	0.4%	0	0	SBT
Madison Ave	0.9%	-159	-1	N/A	-	-	0	SBT
5th Ave	-	-	0	N/A	0.5%	-174	-1	SBT
West Side Highway	0.1%	-503	-1	N/A	1.9%	-836	-16	SBT
FDR Drive	0.5%	-770	-4	N/A	2.0%	-972	-19	NBT, NBR
Sum (If Assigned)			152				195	

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 10, Air Quality

2023

Contents

- 10A, Description of Pollutants and MOVES Modeling Files (Electronic)
- 10B, Project-Level Hot-Spot Screening Procedure
- 10C, Highway Link Particulate Matter Hot-Spot Detailed Assessment (Methodology, Interagency Consultation, and Results)
- 10D, Changes in Annual Average Daily Traffic (AADT)

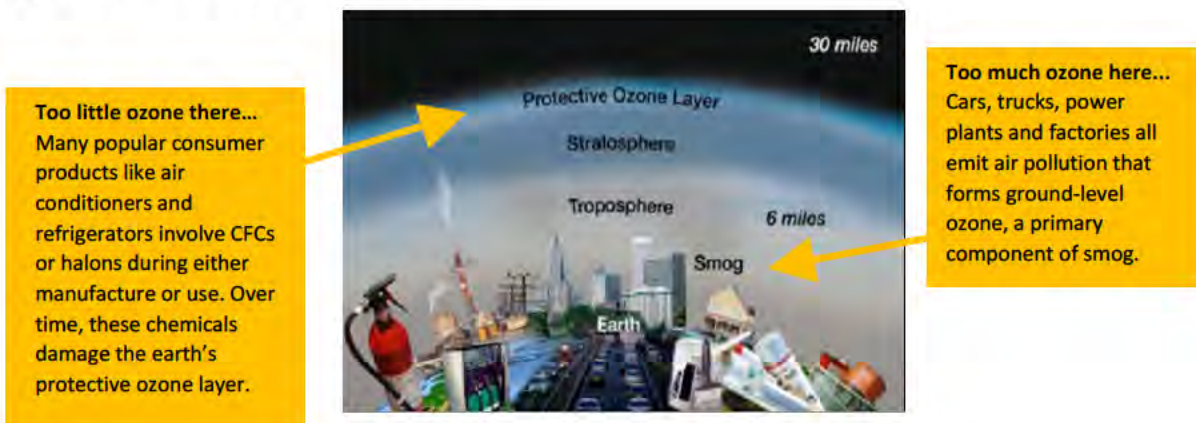
10A, Description of Pollutants and MOVES Modeling Files (Electronic)

10A.1 Criteria and Mobile Source Air Toxic Descriptions

Ozone

Ozone (O_3) is a colorless toxic gas. As shown in **Figure 10A-1**, O_3 is found in both the Earth's upper and lower atmospheric levels. In the upper atmosphere, O_3 is a naturally occurring gas that helps to prevent the sun's harmful ultraviolet rays from reaching the Earth. In the lower layer of the atmosphere, O_3 is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight.

Figure 10A-1. Ozone in the Atmosphere



Source: EPA

O_3 at ground level is a harmful air pollutant, because of its effects on people and the environment, and it is the main ingredient in "smog." O_3 in the air we breathe can harm our health. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.

Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care. O_3 also damages vegetation by inhibiting its growth. The effects of changes in VOC and NO_x emissions are examined on a regional level.

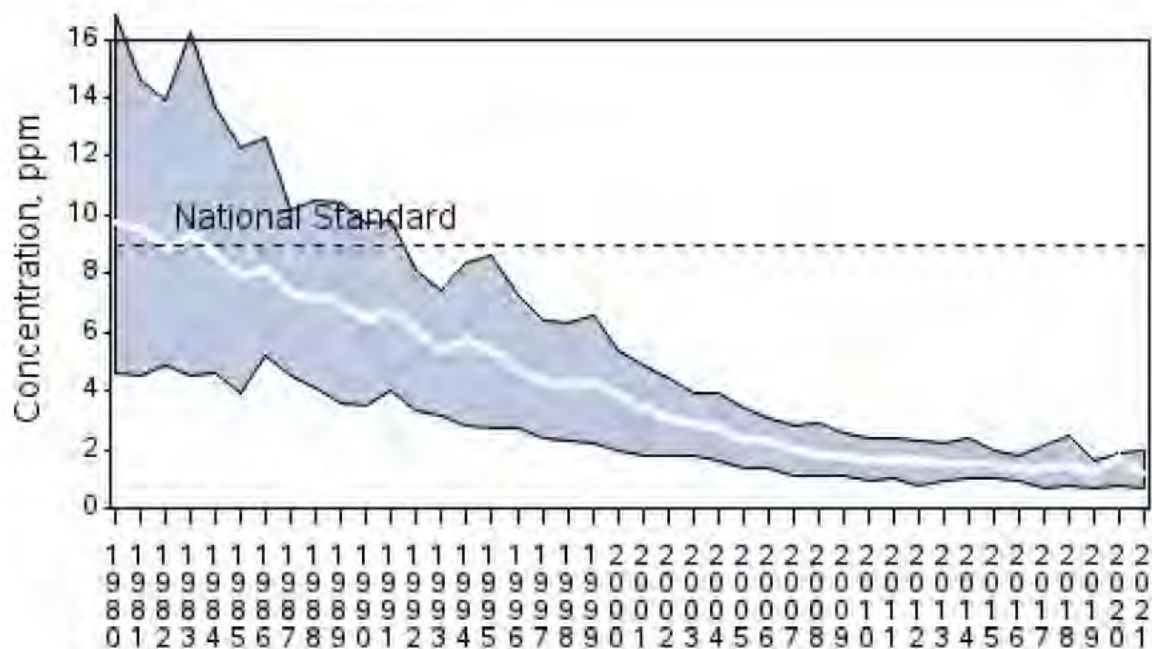
Carbon Monoxide

Carbon monoxide (CO) is a colorless gas that interferes with the transfer of oxygen to the brain. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Motor vehicle emissions (on-road motor vehicle exhaust) are the primary source of CO. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium, or heart disease. CO levels are generally highest in the colder months of the year when temperature inversions (when warmer air traps colder air near the ground) and/or stable atmospheric conditions are more frequent.

CO concentrations can vary greatly over relatively short distances. Relatively high concentrations of CO are typically found near congested intersections, along heavily used roadways carrying slow-moving traffic, and in areas where atmospheric dispersion is inhibited by urban “street canyon” conditions. Consequently, CO concentrations are predicted on a microscale basis.

As shown in **Figure 10A-2**, national 8-hour average CO levels have decreased by 87 percent between 1980 and 2021. This reduction is due in large part to the Clean Air Act (CAA). The CAA required the U.S. Environmental Protection Agency (EPA) to issue a series of rules to reduce pollution from vehicle exhaust, refueling emissions and evaporating gasoline. As a result, emissions from a new car purchased today are over 90 percent cleaner than a new vehicle purchased in 1970. This applies to SUVs and pickup trucks, as well. As cleaner vehicles enter the national fleet and older vehicles are taken out of service, emissions continue to drop.

Figure 10A-2: CO Air Quality, 1980-2021



1980 to 2021 : 87% decrease in National Average

Source: <https://www.epa.gov/air-trends/carbon-monoxide-trends#conat>

Particulate Matter and Black Carbon

Particulate pollution is composed of solid particles or liquid droplets that are small enough to remain suspended in the air. In general, particulate pollution can include dust, soot, salts, acids, metals and smoke; these can be irritating but usually are not poisonous. Particulate pollution also can include bits of solid or liquid substances that can be highly toxic. Of particular concern are those particles that are smaller than, or equal to, 10 microns (PM₁₀) or 2.5 microns (PM_{2.5}) in size. A micron, also referred to as a micrometer, is

a millionth of a meter. PM₁₀ refers to particulate matter less than or equal to 10 microns in diameter, about one-seventh the thickness of a human hair (Figure 10A-3).

Figure 10A-3. Relative Particulate Matter Size



Source: EPA Office of Air and Radiation

Major sources of PM₁₀ include motor vehicles; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Suspended particulates produce haze and reduce visibility. Data collected through numerous nationwide studies indicate that most of the PM₁₀ comes from the following:

- Fugitive dust
- Wind erosion
- Agricultural and forestry sources

A small portion of particulate matter is the product of fuel combustion processes. In the case of PM_{2.5}, the combustion of fossil fuels accounts for a large portion of this pollutant. The main health effect of airborne particulate matter is on the respiratory system. PM_{2.5} refers to particulates that are 2.5 microns or less in diameter, roughly 1/28th the diameter of a human hair. PM_{2.5} results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur dioxide (SO₂), nitrogen oxides, and volatile organic compounds. Black carbon (BC) is one component of PM_{2.5} and is emitted from diesel exhaust and other sources. Like PM₁₀, PM_{2.5} can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues.

Nitrogen Dioxide and Nitric Oxide

Nitrogen dioxide (NO₂), a brownish gas, irritates the lungs. It can cause breathing difficulties at high concentrations. Like O₃, NO₂ is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as nitrogen oxides (NO_x) and are major contributors to ozone formation. NO₂ also contributes to the formation of PM₁₀, small liquid and solid particles that are less than 10 microns in diameter (see discussion of PM₁₀ above). At atmospheric concentration, NO₂ is only potentially irritating. In high concentrations, the result is a brownish-red cast to the atmosphere and reduced visibility. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (ppm).

Lead

Pb is a stable element that persists and accumulates both in the environment and in animals. Its principal effects in humans are on the blood-forming, nervous, and renal systems. Lead levels in the urban environment from mobile sources have substantially decreased due to the Federally mandated switch to lead-free gasoline.

Sulfur Dioxide

SO₂ is a product of high-sulfur fuel combustion. The main sources of SO₂ are coal and oil used in power stations, industry and for domestic heating. Industrial chemical manufacturing is another source of SO₂. SO₂ is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ can also yellow plant leaves and erode iron and steel.

Mobile Source Air Toxics

In addition to the criteria pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Toxic air pollutants are those pollutants known or suspected to cause cancer or other serious health effects. Most air toxics originate from human made sources, including on-road mobile sources, nonroad mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Mobile source air toxics (MSATs) are a subset of the 188 air toxics defined by the CAA Amendments. MSAT are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted into the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (<http://www.epa.gov/iris/>). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from its 2011 National Air Toxics Assessment (NATA) (<https://www.epa.gov/national-air-toxics-assessment>). These are:

- 1,3-butadiene – characterized as carcinogenic to humans by inhalation.
- Acetaldehyde – classified as a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- Acrolein – major effects from chronic (long-term) inhalation exposure consist of general respiratory congestion and eye, nose, and throat irritation. The potential carcinogenicity of acrolein cannot be determined based on existing data.
- Benzene – characterized as a known human carcinogen.
- Diesel particulate matter (DPM) – likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases. Diesel exhaust also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.
- Ethylbenzene – classified as a Group D, not classifiable as to human carcinogenicity. Chronic exposure to ethylbenzene by inhalation in humans has shown conflicting results regarding its effects on the blood.
- Formaldehyde – classified as a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- Naphthalene – classified naphthalene as a Group C, possible human carcinogen. Acute exposure of humans to naphthalene by inhalation, ingestion, and dermal contact is associated with hemolytic anemia, damage to the liver, and neurological damage. Cataracts have also been reported in workers acutely exposed to naphthalene by inhalation and ingestion.
- Polycyclic organic matter (POM) – defines a broad class of compounds that includes the polycyclic aromatic hydrocarbon compounds (PAHs), of which benzo[a]pyrene is a member. Cancer is the major concern from exposure to POM. EPA has classified seven PAHs (benzo[a]pyrene, benz[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene) as Group B2, probable human carcinogens.

10B, Project-Level Hot-Spot Screening Procedure

The following tables present the details of the screening analysis that was performed to determine if detailed microscale modeling for carbon monoxide (CO), particulate matter (PM₁₀ or PM_{2.5}) would be required to assess the potential air quality effects of implementing the CBD Tolling Program. The screening was conducted using the criteria from NYSDOT's *The Environmental Manual*, Chapter 1.1. **Chapter 10, "Air Quality," Section 10.3.2.2** presents the results of the screening analysis.

Table 10B-1. Upper East Side Study Area – No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	E 60th Street & Queensboro Bridge Exit	0	0	807	618	Pass	NA	0	0	940	711	Pass	NA	0	0	473	243	Pass	NA	0	0	437	366	Pass	NA
2	E 60th Street & 3rd Ave	C	C	1720	1439	Pass	NA	C	C	1582	1238	Pass	NA	C	B	1477	939	Pass	NA	C	B	1676	1189	Pass	NA
3	E 60th Street & York Ave	C	C	1386	1128	Pass	NA	C	C	1653	1224	Pass	NA	C	B	1691	1151	Pass	NA	C	C	1402	1002	Pass	NA
4	E 59th Street & 2nd Ave	E	C	3246	2455	Pass	NA	D	C	3686	1731	Pass	NA	E	B	3803	1041	Pass	NA	C	A	3476	1035	Pass	NA
5	E 60th Street & 2nd Ave	C	C	2829	2368	Pass	NA	C	C	3188	2041	Pass	NA	C	B	3092	1109	Pass	NA	C	B	2939	976	Pass	NA
6	E 60th Street & 1st Ave	C	C	1740	1274	Pass	NA	C	C	1667	1158	Pass	NA	B	B	1469	847	Pass	NA	B	B	1727	1434	Pass	NA
7	E 60th Street & Lexington Ave	C	C	1495	1266	Pass	NA	C	C	1345	1006	Pass	NA	B	B	1205	711	Pass	NA	C	C	1640	903	Pass	NA
8a	E 60th Street & Park Ave NB	C	C	1476	1273	Pass	NA	C	C	1305	1037	Pass	NA	C	C	1474	1024	Pass	NA	C	C	974	822	Pass	NA
8b	E 60th Street & Park Ave SB	C	C	1754	1701	Pass	NA	B	B	1344	1225	Pass	NA	B	B	1325	1105	Pass	NA	B	B	1368	1094	Pass	NA
9	E 60th Street & Madison Ave	B	B	1392	1172	Pass	NA	B	B	1074	828	Pass	NA	C	B	1372	1007	Pass	NA	B	B	1374	1120	Pass	NA
10	E 62nd Street & Queensboro Bridge Exit	B	B	1638	1200	Pass	NA	B	B	1795	1645	Pass	NA	B	A	1308	672	Pass	NA	B	B	1880	2032	Pass	NA
11	E 60th Street & 5th Ave	C	C	1607	1313	Pass	NA	C	C	1270	955	Pass	NA	C	B	1209	827	Pass	NA	C	B	1508	956	Pass	NA
12	E 63rd Street & York Ave	C	C	2394	2086	Pass	NA	C	C	2457	1988	Pass	NA	D	D	2374	1869	Fail	Pass	C	C	2021	1437	Pass	NA
13	E 53rd Street & FDR Drive	0	0	491	454	Pass	NA	0	0	502	434	Pass	NA	0	0	528	444	Pass	NA	0	0	523	417	Pass	NA
14	E 61st Street & 5th Ave	C	B	1125	862	Pass	NA	B	B	918	629	Pass	NA	C	B	832	518	Pass	NA	C	B	1160	658	Pass	NA
15	E 65th Street & 5th Ave	D	C	1981	1841	Pass	NA	C	C	1555	1441	Pass	NA	C	C	1819	1701	Pass	NA	C	C	1680	1555	Pass	NA
16	E 66th Street & 5th Avenue	C	C	1590	1420	Pass	NA	C	C	1502	1365	Pass	NA	C	C	1616	1479	Pass	NA	C	C	1529	1360	Pass	NA
17	E 79th Street & 5th Ave	D	D	2012	1839	Fail	Pass	D	C	1920	1771	Pass	NA	D	C	2044	1879	Pass	NA	C	C	1653	1491	Pass	NA
18	E 71st Street & York Ave	C	C	1275	1120	Pass	NA	C	C	1361	1151	Pass	NA	C	C	1430	1183	Pass	NA	C	C	963	642	Pass	NA

Table 10B-2. Upper East Side Study Area – No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN			MD LOS		MD INCREMENT			MD HDDV	MD SCREEN			PM LOS		PM INCREMENT			PM HDDV	PM SCREEN			LN LOS		LN INCREMENT			LN HDDV	LN SCREEN		
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT				
1	E 60th Street & Queensboro Bridge Exit	0	0	-6	-4	0	-10	Pass	NA	0	0	-1	-4	0	-5	Pass	NA	0	0	0	-3	-1	-4	Pass	NA	0	0	-2	-1	0	-3	Pass	NA				
2	E 60th Street & 3rd Ave	C	C	-21	-11	-1	-33	Pass	NA	C	C	-28	-11	0	-39	Pass	NA	C	B	-17	-16	0	-33	Pass	NA	C	B	-15	-6	0	-21	Pass	NA				
3	E 60th Street & York Ave	C	C	-3	-6	0	-9	Pass	NA	C	C	-4	-7	0	-11	Pass	NA	C	B	-4	-6	0	-10	Pass	NA	C	C	-2	-4	0	-6	Pass	NA				
4	E 59th Street & 2nd Ave	E	C	-53	-27	-3	-83	Pass	NA	D	C	-212	-30	-11	-253	Pass	NA	E	B	-303	-79	-8	-390	Pass	NA	C	A	-65	-31	-16	-112	Pass	NA				
5	E 60th Street & 2nd Ave	C	C	-36	-25	-2	-63	Pass	NA	C	C	-99	-31	-1	-131	Pass	NA	C	B	-135	-82	-7	-224	Pass	NA	C	B	-53	-17	-16	-86	Pass	NA				
6	E 60th Street & 1st Ave	C	C	-31	-19	-2	-52	Pass	NA	C	C	-46	-13	-3	-62	Pass	NA	B	B	-17	-21	-1	-39	Pass	NA	B	B	-6	-4	0	-10	Pass	NA				
7	E 60th Street & Lexington Ave	C	C	-15	-10	-1	-26	Pass	NA	C	C	-22	-10	-1	-33	Pass	NA	B	B	-22	-13	0	-35	Pass	NA	C	C	-11	-10	-1	-22	Pass	NA				
8a	E 60th Street & Park Ave NB	C	C	-60	-22	-4	-86	Pass	NA	C	C	-23	-11	-2	-36	Pass	NA	C	C	-8	-14	0	-22	Pass	NA	C	C	-6	-7	0	-13	Pass	NA				
8b	E 60th Street & Park Ave SB	C	C	-3	-1	0	-4	Pass	NA	B	B	-5	-3	0	-8	Pass	NA	B	B	-2	-5	0	-7	Pass	NA	B	B	-3	-2	0	-5	Pass	NA				
9	E 60th Street & Madison Ave	B	B	-16	-17	-1	-34	Pass	NA	B	B	-11	-10	-1	-22	Pass	NA	C	B	-7	-25	0	-32	Pass	NA	B	B	-3	-6	0	-9	Pass	NA				
10	E 62nd Street & Queensboro Bridge Exit	B	B	-4	-4	0	-8	Pass	NA	B	B	-1	0	0	-1	Pass	NA	B	A	0	-2	0	-2	Pass	NA	B	B	-1	0	0	-1	Pass	NA				
11	E 60th Street & 5th Ave	C	C	-8	-25	0	-33	Pass	NA	C	C	-7	-16	0	-23	Pass	NA	C	B	-10	-34	0	-44	Pass	NA	C	B	-3	-11	-1	-15	Pass	NA				
12	E 63rd Street & York Ave	C	C	-2	-5	0	-7	Pass	NA	C	C	-4	-6	0	-10	Pass	NA	D	D	-3	-5	0	-8	Fail	Pass	C	C	-4	-2	0	-6	Pass	NA				
13	E 53rd Street & FDR Drive	0	0	-1	0	0	-1	Pass	NA	0	0	-1	-2	0	-3	Pass	NA	0	0	0	-1	0	-1	Pass	NA	0	0	-1	0	0	-1	Pass	NA				
14	E 61st Street & 5th Ave	C	B	-6	-23	0	-29	Pass	NA	B	B	-7	-15	0	-22	Pass	NA	C	B	-7	-20	0	-27	Pass	NA	C	B	-2	-10	-2	-14	Pass	NA				
15	E 65th Street & 5th Ave	D	C	-2	-12	0	-14	Pass	NA	C	C	-4	-7	0	-11	Pass	NA	C	C	-1	-6	0	-7	Pass	NA	C	C	-1	-4	0	-5	Pass	NA				
16	E 66th Street & 5th Avenue	C	C	-5	-13	0	-18	Pass	NA	C	C	-6	-7	0	-13	Pass	NA	C	C	-1	-6	0	-7	Pass	NA	C	C	-1	-4	0	-5	Pass	NA				
17	E 79th Street & 5th Ave	D	D	-5	-13	0	-18	Fail	Pass	D	C	-2	-6	0	-8	Pass	NA	D	C	-2	-5	0	-7	Pass	NA	C	C	-1	-4	0	-5	Pass	NA				
18	E 71st Street & York Ave	C	C	-3	-5	0	-8	Pass	NA	C	C	-4	-5	0	-9	Pass	NA	C	C	-5	-6	0	-11	Pass	NA	C	C	-4	-6	0	-10	Pass	NA				

Table 10B-3. Long Island City Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1a	Pulaski Bridge / 11th Street & Jackson Avenue	E	E	2473	2447	Fail	Pass	D	D	2030	2038	Fail	Pass	D	D	2690	2739	Fail	Pass	0	0	0	0	Pass	NA
1b	11th Street & 48TH Avenue	C	C	1305	1293	Pass	NA	C	C	1060	1068	Pass	NA	B	B	1361	1363	Pass	NA	0	0	0	0	Pass	NA
2	50th Avenue @ Vernon Blvd	B	B	544	553	Pass	NA	B	B	586	635	Pass	NA	B	B	648	739	Pass	NA	0	0	0	0	Pass	NA
3	Green Street & McGuinness Blvd	C	C	2487	2442	Pass	NA	C	C	1837	1774	Pass	NA	D	D	2201	2068	Fail	Pass	0	0	0	0	Pass	NA
4	McGuinness Blvd & Freeman Street	O	O	2723	2647	Pass	NA	O	O	2097	1965	Pass	NA	O	O	2570	2401	Pass	NA	0	0	0	0	Pass	NA
5	21st Street & 49th Avenue	D	D	948	941	Fail	Pass	D	C	875	880	Pass	NA	B	B	1108	1150	Pass	NA	0	0	0	0	Pass	NA
7	11th Street & Borden Avenue	O	O	1443	1409	Pass	NA	O	O	1696	1784	Pass	NA	O	O	1529	1670	Pass	NA	0	0	0	0	Pass	NA
8a	Van Dam Street & QMT Expy	D	C	2344	2200	Pass	NA	D	B	2192	2009	Pass	NA	C	C	2072	1852	Pass	NA	0	0	0	0	Pass	NA
8b	Van Dam Street & Borden Avenue	E	E	1376	1290	Fail	Pass	D	D	1276	1077	Fail	Pass	C	C	1373	1251	Pass	NA	0	0	0	0	Pass	NA
9	Jackson Ave / Northern Blvd & Queens Plaza	C	C	2556	2416	Pass	NA	O	O	2497	1966	Pass	NA	O	O	2582	1908	Pass	NA	0	0	0	0	Pass	NA
11a	Thomson Avenue & Dutch Kills Street	O	O	1681	1669	Pass	NA	C	C	1530	1483	Pass	NA	C	C	2143	2144	Pass	NA	0	0	0	0	Pass	NA
11b	Thomson Avenue & Dutch Kills Street	O	O	2523	2358	Pass	NA	O	O	2390	2344	Pass	NA	O	O	2798	2799	Pass	NA	0	0	0	0	Pass	NA
12	21st Street & Queens Plaza N	D	D	1998	1915	Fail	Pass	D	D	1723	1710	Fail	Pass	E	E	2298	2198	Fail	Pass	0	0	0	0	Pass	NA

Table 10B-4. Long Island City Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1a	Pulaski Bridge / 11th Street & Jackson Avenue	E	E	0	0	0	0	Fail	Pass	D	D	0	0	0	0	Fail	Pass	D	D	0	0	0	0	Fail	Pass	0	0	0	0	0	0	Pass	NA
1b	11th Street & 48th Avenue	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA	B	B	0	0	0	0	Pass	NA	0	0	0	0	0	0	Pass	NA
2	50th Avenue @ Vernon Blvd	B	B	1	-1	0	0	Pass	NA	B	B	2	1	0	3	Pass	NA	B	B	3	1	0	4	Pass	NA	0	0	0	0	0	0	Pass	NA
3	Green Street & McGuinness Blvd	C	C	-2	-1	0	-3	Pass	NA	C	C	-6	-1	-1	-8	Pass	NA	D	D	-4	0	0	-4	Fail	Pass	0	0	0	0	0	0	Pass	NA
4	McGuinness Blvd & Freeman Street	O	O	-5	0	0	-5	Pass	NA	O	O	-11	-2	0	-13	Pass	NA	O	O	-6	-1	0	-7	Pass	NA	0	0	0	0	0	0	Pass	NA
5	21st Street & 49th Avenue	D	D	0	0	0	0	Fail	Pass	D	C	0	0	0	0	Pass	NA	B	B	0	0	0	0	Pass	NA	0	0	0	0	0	0	Pass	NA
7	11th Street & Borden Avenue	O	O	0	0	0	0	Pass	NA	O	O	0	0	0	0	Pass	NA	O	O	0	0	0	0	Pass	NA	0	0	0	0	0	0	Pass	NA
8a	Van Dam Street & QMT Expy	D	C	-10	-2	-1	-13	Pass	NA	D	B	-16	-2	-1	-19	Pass	NA	C	C	-12	-6	-1	-19	Pass	NA	0	0	0	0	0	0	Pass	NA
8b	Van Dam Street & Borden Avenue	E	E	-7	-1	0	-8	Fail	Pass	D	D	-14	-3	-2	-19	Fail	Pass	C	C	-9	-5	-1	-15	Pass	NA	0	0	0	0	0	0	Pass	NA
9	Jackson Ave / Northern Blvd & Queens Plaza	C	C	0	0	0	0	Pass	NA	O	O	0	0	0	0	Pass	NA	O	O	0	0	0	0	Pass	NA	0	0	0	0	0	0	Pass	NA
11a	Thomson Avenue & Dutch Kills Street	O	O	-1	-1	0	-2	Pass	NA	C	C	-2	-1	0	-3	Pass	NA	C	C	0	1	0	1	Pass	NA	0	0	0	0	0	0	Pass	NA
11b	Thomson Avenue & Dutch Kills Street	O	O	-1	-1	0	-2	Pass	NA	O	O	-3	-3	-1	-7	Pass	NA	O	O	0	0	0	0	Pass	NA	0	0	0	0	0	0	Pass	NA
12	21st Street & Queens Plaza N	D	D	0	0	0	0	Fail	Pass	D	D	-2	-1	0	-3	Fail	Pass	E	E	0	-1	0	-1	Fail	Pass	0	0	0	0	0	0	Pass	NA

Table 10B-5. Lower Manhattan Study Area – No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	Trinity Place & Edgar Street	B	B	117	97	Pass	NA	C	C	364	462	Pass	NA	C	C	144	138	Pass	NA	0	0	0	0	Pass	NA
2	Trinity Place & Rector Street	C	C	251	228	Pass	NA	C	C	508	584	Pass	NA	C	C	264	236	Pass	NA	0	0	0	0	Pass	NA
3a	HCT Entrance/Exit & West Street	C	C	4216	4200	Pass	NA	B	B	4055	4205	Pass	NA	A	A	3511	3597	Pass	NA	0	0	0	0	Pass	NA
3b	HCT Exit & West Street & West Thams Street	C	C	3339	3310	Pass	NA	C	C	3265	3237	Pass	NA	C	C	2373	2240	Pass	NA	0	0	0	0	Pass	NA
4	Chambers Street & Centre Street	C	C	1588	1489	Pass	NA	C	C	1409	988	Pass	NA	E	D	1873	1545	Fail	Pass	0	0	0	0	Pass	NA
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	C	C	2586	2324	Pass	NA	D	D	1988	1525	Fail	Pass	C	C	1533	1452	Pass	NA	0	0	0	0	Pass	NA
5b	Canal Street & Holland Tunnel On-Ramp	E	E	2013	1905	Fail	Pass	C	B	1319	1091	Pass	NA	F	F	1889	1829	Fail	Pass	0	0	0	0	Pass	NA
7a	Canal Street S & West Street	D	D	5849	5740	Fail	Pass	C	C	4638	4610	Pass	NA	D	D	5146	4982	Fail	Pass	0	0	0	0	Pass	NA
9	West Street & Albany Street	C	C	4436	4422	Pass	NA	C	C	4149	4373	Pass	NA	C	C	4049	4070	Pass	NA	0	0	0	0	Pass	NA
10	West Street & Vesey Street	C	C	4668	4628	Pass	NA	C	C	4562	4701	Pass	NA	C	C	4373	4360	Pass	NA	0	0	0	0	Pass	NA
11	West Street & Chambers Street	D	C	5053	4961	Pass	NA	C	C	4845	4848	Pass	NA	D	C	4840	4721	Pass	NA	0	0	0	0	Pass	NA
14	Canal Street/Manhattan Bridge & Bowery	D	C	8718	8252	Pass	NA	C	B	2774	1769	Pass	NA	C	B	3276	2217	Pass	NA	0	0	0	0	Pass	NA
15	Manhattan Bridge & Bowery	C	B	1421	1149	Pass	NA	B	A	1162	630	Pass	NA	B	B	1395	792	Pass	NA	0	0	0	0	Pass	NA
18	6th Avenue & Watts Street	B	B	1884	1739	Pass	NA	B	B	1784	1525	Pass	NA	C	C	997	851	Pass	NA	0	0	0	0	Pass	NA
19	Canal Street & 6th Avenue/Laigh Street	E	D	3634	3451	Fail	Pass	C	C	2555	2186	Pass	NA	C	C	2932	2631	Pass	NA	0	0	0	0	Pass	NA

Table 10B-6. Lower Manhattan Study Area – No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN		
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	
1	Trinity Place & Edgar Street	B	B	-1	-10	0	-11	Pass	NA	C	C	10	-11	0	-1	Pass	NA	C	C	0	-4	0	-4	Pass	NA	0	0	0	0	0	0	0	Pass	NA
2	Trinity Place & Rector Street	C	C	-2	-8	0	-10	Pass	NA	C	C	3	14	0	17	Pass	NA	C	C	-1	-3	0	-4	Pass	NA	0	0	0	0	0	0	0	Pass	NA
3a	HCT Entrance/Exit & West Street	C	C	-2	8	0	6	Pass	NA	B	B	1	12	0	13	Pass	NA	A	A	0	17	0	17	Pass	NA	0	0	0	0	0	0	0	Pass	NA
3b	HCT Exit & West Street & West Thames Street	C	C	-1	0	0	-1	Pass	NA	C	C	-3	-1	0	-4	Pass	NA	C	C	-2	-4	0	-6	Pass	NA	0	0	0	0	0	0	0	Pass	NA
4	Chambers Street & Centre Street	C	C	-23	-40	0	-63	Pass	NA	C	C	-32	-152	0	-184	Pass	NA	E	D	-61	-124	0	-185	Fail	Pass	0	0	0	0	0	0	0	Pass	NA
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	C	C	-17	-13	-1	-31	Pass	NA	D	D	-42	-6	-8	-56	Fail	Pass	C	C	-2	-1	0	-3	Pass	NA	0	0	0	0	0	0	0	Pass	NA
5b	Canal Street & Holland Tunnel On-Ramp	E	E	-13	-9	-3	-25	Fail	Pass	C	B	-33	-6	-10	-49	Pass	NA	F	F	-2	-1	0	-3	Fail	Pass	0	0	0	0	0	0	0	Pass	NA
7a	Canal Street S & West Street	D	D	-6	-5	0	-11	Fail	Pass	C	C	-5	-1	0	-6	Pass	NA	D	D	-5	-4	0	-9	Fail	Pass	0	0	0	0	0	0	0	Pass	NA
9	West Street & Albany Street	C	C	0	0	0	0	Pass	NA	C	C	6	4	0	10	Pass	NA	C	C	0	0	0	0	Pass	NA	0	0	0	0	0	0	0	Pass	NA
10	West Street & Vesey Street	C	C	-1	-1	0	-2	Pass	NA	C	C	5	2	0	7	Pass	NA	C	C	-1	-1	0	-2	Pass	NA	0	0	0	0	0	0	0	Pass	NA
11	West Street & Chambers Street	D	C	-4	-2	0	-6	Pass	NA	C	C	1	0	0	1	Pass	NA	D	C	-2	-4	0	-6	Pass	NA	0	0	0	0	0	0	0	Pass	NA
14	Canal Street/Manhattan Bridge & Bowery	D	C	-44	-14	-4	-62	Pass	NA	C	B	-127	-31	-9	-167	Pass	NA	C	B	-48	-35	-1	-84	Pass	NA	0	0	0	0	0	0	0	Pass	NA
15	Manhattan Bridge & Bowery	C	B	0	0	0	0	Pass	NA	B	A	0	0	0	0	Pass	NA	B	B	0	0	0	0	Pass	NA	0	0	0	0	0	0	0	Pass	NA
18	6th Avenue & Watts Street	B	B	-7	-6	0	-13	Pass	NA	B	B	-9	-6	-1	-16	Pass	NA	C	C	-2	-6	0	-8	Pass	NA	0	0	0	0	0	0	0	Pass	NA
19	Canal Street & 6th Avenue/Laight Street	E	D	-20	-8	-1	-29	Fail	Pass	C	C	-46	-4	-3	-53	Pass	NA	C	C	-16	-6	-1	-23	Pass	NA	0	0	0	0	0	0	0	Pass	NA

Table 10B-7. Queens-Midtown Tunnel – No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10%	NB	BD	NB	BD	LOS	10%	NB	BD	NB	BD	LOS	10%	NB	BD	NB	BD	LOS	10%
1	E 37th Street & 3rd Avenue	B	B	1837	1808	Pass	NA	C	C	1521	1531	Pass	NA	B	B	1790	1723	Pass	NA	C	C	1799	1861	Pass	NA
2	E 36th Street & 2nd Avenue	D	D	2437	2353	Fail	Pass	F	F	2640	2656	Fail	Pass	C	C	3036	3177	Pass	NA	C	C	2581	2980	Pass	NA
3	E 34th Street & 3rd Avenue	D	D	2071	1943	Fail	Pass	D	C	2247	2028	Pass	NA	D	C	2507	2232	Pass	NA	C	C	2410	2156	Pass	NA
4	E 35th Street & 3rd Avenue	B	B	1684	1584	Pass	NA	B	B	1734	1580	Pass	NA	B	B	1961	1733	Pass	NA	B	B	1878	1666	Pass	NA
5	E 34th Street & 2nd Avenue	D	C	2826	2768	Pass	NA	C	C	2573	2477	Pass	NA	C	D	2712	2605	Fail	Pass	C	B	2769	2591	Pass	NA
6	E 35th Street & 2nd Avenue	B	B	2205	2160	Pass	NA	B	B	1767	1707	Pass	NA	B	B	2067	1977	Pass	NA	B	B	2042	1926	Pass	NA

Table 10B-8. Queens-Midtown Tunnel – No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1	E 37th Street & 3rd Avenue	B	B	-2	-1	-1	-4	Pass	NA	C	C	-2	0	0	-2	Pass	NA	B	B	-4	-2	0	-6	Pass	NA	C	C	1	-1	0	0	Pass	NA
2	E 36th Street & 2nd Avenue	D	D	-8	-7	0	-15	Fail	Pass	F	F	-2	0	0	-2	Fail	Pass	C	C	7	-2	0	5	Pass	NA	C	C	4	6	0	10	Pass	NA
3	E 34th Street & 3rd Avenue	D	D	-9	-11	0	-20	Fail	Pass	D	C	-14	-6	0	-20	Pass	NA	D	C	-9	-14	0	-23	Pass	NA	C	C	-3	-2	0	-5	Pass	NA
4	E 35th Street & 3rd Avenue	B	B	-5	-2	0	-7	Pass	NA	B	B	-8	-2	-1	-11	Pass	NA	B	B	-6	-6	0	-12	Pass	NA	B	B	-2	-2	0	-4	Pass	NA
5	E 34th Street & 2nd Avenue	D	C	-4	-3	0	-7	Pass	NA	C	C	-6	-2	0	-8	Pass	NA	C	D	-1	-6	0	-7	Fail	Pass	C	B	-1	-4	0	-5	Pass	NA
6	E 35th Street & 2nd Avenue	B	B	-3	-4	0	-7	Pass	NA	B	B	-4	-2	0	-6	Pass	NA	B	B	-2	-3	0	-5	Pass	NA	B	B	-1	-1	0	-2	Pass	NA

Table 10B-9. Red Hook Study Area – No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	Hamilton Avenue, Clinton Street & West 9th Street	A	B	5490	5506	Pass	NA	B	B	5387	5689	Pass	NA	B	B	5372	5471	Pass	NA	A	A	3035	3290	Pass	NA
2	Hamilton Avenue NB & West 9th Street	B	B	2324	2289	Pass	NA	B	B	2099	2129	Pass	NA	B	B	1859	1773	Pass	NA	B	B	1110	945	Pass	NA

Table 10B-10. Red Hook Study Area – No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1	Hamilton Avenue, Clinton Street & West 9 th Street	A	B	3	3	1	7	Pass	NA	B	B	23	2	4	29	Pass	NA	B	B	6	2	2	10	Pass	NA	A	A	12	3	2	17	Pass	NA
2	Hamilton Avenue NB & West 9 th Street	B	B	-2	0	-1	-3	Pass	NA	B	B	2	1	1	4	Pass	NA	B	B	-5	-3	0	-8	Pass	NA	B	B	-3	-1	-1	-5	Pass	NA

Table 10B-11. Upper West Side Study Area – No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	W 72nd Street & West End Ave	C	C	1322	1213	Pass	NA	C	C	1360	1214	Pass	NA	D	C	1754	1503	Pass	NA	C	C	1019	872	Pass	NA
2	W 61st Street & West End Ave	B	B	1200	957	Pass	NA	B	B	1088	760	Pass	NA	B	B	1667	1111	Pass	NA	B	B	958	601	Pass	NA
3a	W 79th Street & Riverside Drive	C	C	1856	1712	Pass	NA	B	B	1593	1424	Pass	NA	C	B	1996	1731	Pass	NA	B	B	1308	1129	Pass	NA
4a	W 56th Street & 12th Avenue	B	B	1482	1472	Pass	NA	B	B	903	886	Pass	NA	B	B	989	963	Pass	NA	A	A	625	580	Pass	NA
4b	W 56th Street & West Side Highway	C	C	6271	6230	Pass	NA	C	C	5284	5203	Pass	NA	B	B	5251	5157	Pass	NA	B	B	4724	4564	Pass	NA
5a	W 55th Street & West Side Highway	C	C	5332	5290	Pass	NA	D	D	5106	5025	Fail	Pass	C	C	5021	4921	Pass	NA	C	B	4419	4260	Pass	NA
5b	W 55th Street & 12th Avenue	D	D	598	583	Fail	Pass	C	C	755	729	Pass	NA	D	D	933	889	Fail	Pass	C	C	585	507	Pass	NA
5c	W 55th Street & West Side Highway Arterial	D	D	105	104	Fail	Pass	E	E	220	217	Fail	Pass	A	A	25	25	Pass	NA	A	A	10	9	Pass	NA
6	W 60th Street & Broadway	C	C	1740	1544	Pass	NA	C	C	1620	1364	Pass	NA	C	C	1878	1561	Pass	NA	C	B	1493	1148	Pass	NA
7	W 60th Street & Columbus Ave	B	B	1442	1181	Pass	NA	A	A	1507	1101	Pass	NA	A	A	1650	1077	Pass	NA	A	A	1491	850	Pass	NA
8	W 60th Street & Amsterdam Ave	C	C	1238	970	Pass	NA	C	C	1421	1065	Pass	NA	C	C	1795	1254	Pass	NA	B	B	1221	1005	Pass	NA
9	W 60th Street & West End Ave	B	B	1316	1049	Pass	NA	B	B	1294	903	Pass	NA	B	B	1801	1218	Pass	NA	B	B	1055	665	Pass	NA
10	W 61st Street & Amsterdam Ave	A	A	1114	872	Pass	NA	A	A	1230	915	Pass	NA	A	A	1599	1096	Pass	NA	A	A	1133	932	Pass	NA
11	W 61st Street & Columbus Ave	C	B	1232	968	Pass	NA	C	B	1314	904	Pass	NA	C	B	1453	867	Pass	NA	B	B	1278	665	Pass	NA
12	W 61st Street & Broadway	B	B	1506	1292	Pass	NA	B	B	1392	1112	Pass	NA	B	B	1688	1332	Pass	NA	B	B	1270	917	Pass	NA
13	W 61st Street & Columbus Ave	B	B	672	624	Pass	NA	B	B	690	615	Pass	NA	B	B	894	804	Pass	NA	B	B	732	632	Pass	NA
14	W 81st Street & Central Park West	D	C	1849	1726	Pass	NA	D	C	2061	1894	Pass	NA	D	C	2318	2118	Pass	NA	C	C	1530	1359	Pass	NA
15	W 66th Street & Central Park West	C	C	1841	1711	Pass	NA	C	C	2037	1862	Pass	NA	C	C	2162	1949	Pass	NA	C	B	1613	1365	Pass	NA
16	W 65th Street & Central Park West	D	C	2030	1910	Pass	NA	C	C	1915	1763	Pass	NA	D	D	2191	1998	Fail	Pass	C	C	1735	1569	Pass	NA

Table 10B-12. Upper West Side Study Area – No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT
1	W 72nd Street & West End Ave	C	C	-4	-10	0	-14	Pass	NA	C	C	-6	-4	0	-10	Pass	NA	D	C	-4	-10	0	-14	Pass	NA	C	C	0	-5	0	-5	Pass	NA
2	W 61st Street & West End Ave	B	B	-17	-14	0	-31	Pass	NA	B	B	-22	-8	0	-30	Pass	NA	B	B	-15	-13	0	-28	Pass	NA	B	B	-3	-9	0	-12	Pass	NA
3a	W 79th Street & Riverside Drive	C	C	0	-7	0	-7	Pass	NA	B	B	0	-5	0	-5	Pass	NA	C	B	0	-7	0	-7	Pass	NA	B	B	0	-2	0	-2	Pass	NA
4a	W 56th Street & 12th Avenue	B	B	-2	0	0	-2	Pass	NA	B	B	-1	0	0	-1	Pass	NA	B	B	-1	-1	0	-2	Pass	NA	A	A	0	-3	0	-3	Pass	NA
4b	W 56th Street & West Side Highway	C	C	-2	-1	-1	-4	Pass	NA	C	C	-55	-2	-1	-58	Pass	NA	B	B	-2	-3	0	-5	Pass	NA	B	B	-1	-9	0	-10	Pass	NA
5a	W 55th Street & West Side Highway	C	C	0	0	0	0	Pass	NA	D	D	0	-1	0	-1	Fail	Pass	C	C	-1	-1	0	-2	Pass	NA	C	B	-1	0	0	-1	Pass	NA
5b	W 55th Street & 12th Avenue	D	D	0	-2	0	-2	Fail	Pass	C	C	-1	-1	0	-2	Pass	NA	D	D	-1	-1	0	-2	Fail	Pass	C	C	0	-2	0	-2	Pass	NA
5c	W 55th Street & West Side Highway Arterial	D	D	0	0	0	0	Fail	Pass	E	E	0	0	0	0	Fail	Pass	A	A	0	0	0	0	Pass	NA	A	A	0	0	0	0	Pass	NA
6	W 60th Street & Broadway	C	C	-10	-11	0	-21	Pass	NA	C	C	-15	-9	-1	-25	Pass	NA	C	C	-5	-9	0	-14	Pass	NA	C	B	-2	-8	0	-10	Pass	NA
7	W 60th Street & Columbus Ave	B	B	-28	-8	-3	-39	Pass	NA	A	A	-40	-8	-1	-49	Pass	NA	A	A	-27	-8	-2	-37	Pass	NA	A	A	-14	-6	-4	-24	Pass	NA
8	W 60th Street & Amsterdam Ave	C	C	-36	-10	-2	-48	Pass	NA	C	C	-33	-7	-5	-45	Pass	NA	C	C	-18	-8	-3	-29	Pass	NA	B	B	-4	-2	0	-6	Pass	NA
9	W 60th Street & West End Ave	B	B	-16	-16	-2	-34	Pass	NA	B	B	-25	-13	-1	-39	Pass	NA	B	B	-15	-16	0	-31	Pass	NA	B	B	-5	-10	0	-15	Pass	NA
10	W 61st Street & Amsterdam Ave	A	A	-35	-9	-3	-47	Pass	NA	A	A	-29	-6	-5	-40	Pass	NA	A	A	-17	-7	-2	-26	Pass	NA	A	A	-4	-2	0	-6	Pass	NA
11	W 61st Street & Columbus Ave	C	B	-29	-5	-4	-38	Pass	NA	C	B	-38	-8	-1	-47	Pass	NA	C	B	-25	-7	-2	-34	Pass	NA	B	B	-14	-5	-2	-21	Pass	NA
12	W 61st Street & Broadway	B	B	-13	-10	0	-23	Pass	NA	B	B	-14	-10	0	-24	Pass	NA	B	B	-7	-9	0	-16	Pass	NA	B	B	-3	-10	0	-13	Pass	NA
13	W 61st Street & Columbus Ave	B	B	-4	-1	0	-5	Pass	NA	B	B	-2	-1	0	-3	Pass	NA	B	B	-1	-1	0	-2	Pass	NA	B	B	0	-1	0	-1	Pass	NA
14	W 81st Street & Central Park West	D	C	0	-6	0	-6	Pass	NA	D	C	0	-4	0	-4	Pass	NA	D	C	0	-5	0	-5	Pass	NA	C	C	0	-2	0	-2	Pass	NA
15	W 66th Street & Central Park West	C	C	-3	-3	0	-6	Pass	NA	C	C	-3	-4	0	-7	Pass	NA	C	C	-3	-5	0	-8	Pass	NA	C	B	-2	-3	0	-5	Pass	NA
16	W 65th Street & Central Park West	D	C	-4	-4	0	-8	Pass	NA	C	C	-4	-3	0	-7	Pass	NA	D	D	-2	-4	0	-6	Fail	Pass	C	C	-1	-2	0	-3	Pass	NA

Table 10B-13. Robert F. Kennedy Bridge Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	126th Street and 2nd Avenue	C	C	2084	1995	Pass	NA	C	B	2416	2283	Pass	NA	C	C	2600	2352	Pass	NA	B	B	1310	1077	Pass	NA
2	125th Street and 2nd Avenue	C	D	2587	2604	Fail	Pass	C	C	2217	2107	Pass	NA	C	D	2988	2962	Fail	Pass	C	C	1576	1507	Pass	NA
11	E 134th Street & St. Ann's Avenue	C	C	775	775	Pass	NA	C	C	835	835	Pass	NA	C	C	665	665	Pass	NA	C	C	490	490	Pass	NA
22	St Ann's Ave and Bruckner Blvd	C	C	2415	2415	Pass	NA	D	D	2620	2620	Fail	Pass	C	C	2320	2320	Pass	NA	C	C	2265	2265	Pass	NA
17	31st St & Astoria Blvd	C	C	1243	1247	Pass	NA	B	B	901	832	Pass	NA	E	E	1199	1128	Fail	Pass	B	B	954	842	Pass	NA
24	Hoyt N & 31st St	C	C	3076	3049	Pass	NA	B	B	2383	2295	Pass	NA	B	B	2326	2187	Pass	NA	C	C	1956	1769	Pass	NA
3	Hoyt S & 31st St	C	D	1766	1805	Fail	Pass	C	C	1505	1473	Pass	NA	C	C	1860	1812	Pass	NA	C	C	1594	1582	Pass	NA

Table 10B-14. Robert F. Kennedy Bridge Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT
1	126th Street and 2nd Avenue	C	C	-9	-4	0	-13	Pass	NA	C	B	-9	-9	0	-18	Pass	NA	C	C	-5	-10	0	-15	Pass	NA	B	B	-12	-4	-1	-17	Pass	NA
2	125th Street and 2nd Avenue	C	D	-14	-1	-2	-17	Fail	Pass	C	C	-4	-10	0	-14	Pass	NA	C	D	-8	-17	0	-25	Fail	Pass	C	C	-7	-1	-1	-9	Pass	NA
11	E 134th Street & St. Ann's Avenue	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA
22	St Ann's Ave and Bruckner Blvd	C	C	0	0	0	0	Pass	NA	D	D	0	0	0	0	Fail	Pass	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA
17	31st St & Astoria Blvd	C	C	0	0	0	0	Pass	NA	B	B	0	1	0	1	Pass	NA	E	E	-3	0	0	-3	Fail	Pass	B	B	-1	1	0	0	Pass	NA
24	Hoyt N & 31st St	C	C	0	-1	-1	-2	Pass	NA	B	B	-3	0	-1	-4	Pass	NA	B	B	-4	-2	0	-6	Pass	NA	C	C	-3	0	0	-3	Pass	NA
3	Hoyt S & 31st St	C	D	4	0	1	5	Fail	Pass	C	C	2	0	1	3	Pass	NA	C	C	1	1	0	2	Pass	NA	C	C	1	0	1	2	Pass	NA

Table 10B-15. Downtown Brooklyn Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	APPROACH	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN		
			NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	HDDT
1	Flatbush Avenue and Tillary Street	Intersection	F	E	4887	4436	Fail	Pass	E	D	4505	3877	Fail	Pass	E	D	5083	4287	Fail	Pass	D	D	4383	3464	Fail	Pass	Pass
2	Adam Street and Tillary Street	Intersection	D	D	2997	2949	Fail	Pass	D	D	2874	2813	Fail	Pass	D	D	3543	3295	Fail	Pass	C	C	2109	2050	Pass	NA	NA
3	Old Fulton Street and Vine Street	Intersection	D	D	2805	2797	Fail	Pass	D	D	2356	2306	Fail	Pass	B	B	2201	2122	Fail	Pass	C	C	2062	2049	Pass	NA	NA

Table 10B-16. Downtown Brooklyn Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT	NB	BD	MT	BUS	HT		LOS	HDDT
1	Flatbush Avenue and Tillary Street	F	E	-73	-12	-6	-91	Fail	Pass	E	D	-75	-14	-2	-91	Fail	Pass	E	D	-29	-16	-2	-47	Fail	Pass	D	D	-9	-13	-2	-24	Fail	Pass
2	Adam Street and Tillary Street	D	D	-1	-2	0	-3	Fail	Pass	D	D	-3	0	0	-3	Fail	Pass	D	D	-2	0	0	-2	Fail	Pass	C	C	-2	-2	0	-4	Pass	NA
3	Old Fulton Street and Vine Street	D	D	-1	0	0	-1	Fail	Pass	D	D	-2	-1	0	-3	Fail	Pass	B	B	-1	0	0	-1	Pass	NA	C	C	-1	-1	0	-2	Pass	NA

Table 10B-17. Lincoln Tunnel Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	9th Ave and 33rd Street	B	B	1269	1221	Pass	NA	B	B	1219	1133	Pass	NA	B	B	1433	1324	Pass	NA	0	0	0	0	Pass	NA
2	Dyer Ave and 34th Street	C	C	3774	3649	Pass	NA	C	C	3642	3422	Pass	NA	C	C	4181	3912	Pass	NA	0	0	0	0	Pass	NA
3	12th Ave and 34th Street	C	C	4588	4439	Pass	NA	C	C	3819	3676	Pass	NA	C	C	5495	5204	Pass	NA	0	0	0	0	Pass	NA
4	11th Ave and 42nd Street	C	C	12866	12298	Pass	NA	C	C	11647	10729	Pass	NA	C	C	13637	12611	Pass	NA	0	0	0	0	Pass	NA
5	Dyer Ave & 36th Street	C	C	1531	1492	Pass	NA	C	C	1019	908	Pass	NA	C	C	1449	1369	Pass	NA	0	0	0	0	Pass	NA
6	10th Ave and 33rd Street	B	B	1401	1372	Pass	NA	B	B	1482	1403	Pass	NA	B	B	1937	1848	Pass	NA	0	0	0	0	Pass	NA
7	11th Ave and 34th Street	C	C	1955	1903	Pass	NA	C	C	1734	1678	Pass	NA	D	D	1320	1241	Fail	Pass	0	0	0	0	Pass	NA
8	10th Ave and 41st Street	C	C	2411	2296	Pass	NA	C	C	2913	2581	Pass	NA	C	C	2188	1817	Pass	NA	0	0	0	0	Pass	NA
9	12th Ave and 42nd Street	D	D	5394	5232	Fail	Pass	D	D	4831	4650	Fail	Pass	C	C	5824	5527	Pass	NA	0	0	0	0	Pass	NA

Table 10B-18. Lincoln Tunnel Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN		
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	
1	9th Ave and 33rd Street	B	B	-5	-3	0	-8	Pass	NA	B	B	-6	-2	0	-8	Pass	NA	B	B	-4	-2	0	-6	Pass	NA	0	0	0	0	0	0	0	Pass	NA
2	Dyer Ave and 34th Street	C	C	-2	-2	0	-4	Pass	NA	C	C	-3	-3	0	-6	Pass	NA	C	C	-1	-2	0	-3	Pass	NA	0	0	0	0	0	0	0	Pass	NA
3	12th Ave and 34th Street	C	C	-6	-5	0	-11	Pass	NA	C	C	-2	-4	0	-6	Pass	NA	C	C	-5	-6	0	-11	Pass	NA	0	0	0	0	0	0	0	Pass	NA
4	11th Ave and 42nd Street	C	C	-6	-7	-1	-14	Pass	NA	C	C	-19	-10	-2	-31	Pass	NA	C	C	-11	-9	-1	-21	Pass	NA	0	0	0	0	0	0	0	Pass	NA
5	Dyer Ave & 36th Street	C	C	-4	-1	0	-5	Pass	NA	C	C	-9	-1	-1	-11	Pass	NA	C	C	-2	0	0	-2	Pass	NA	0	0	0	0	0	0	0	Pass	NA
6	10th Ave and 33rd Street	B	B	-4	0	0	-4	Pass	NA	B	B	-22	-1	-1	-24	Pass	NA	B	B	-5	-2	0	-7	Pass	NA	0	0	0	0	0	0	0	Pass	NA
7	11th Ave and 34th Street	C	C	-3	-2	0	-5	Pass	NA	C	C	-8	-2	0	-10	Pass	NA	D	D	-5	-6	0	-11	Fail	Pass	0	0	0	0	0	0	0	Pass	NA
8	10th Ave and 41st Street	C	C	-13	-27	-1	-41	Pass	NA	C	C	-37	-31	-2	-70	Pass	NA	C	C	-53	-49	-4	-106	Pass	NA	0	0	0	0	0	0	0	Pass	NA
9	12th Ave and 42nd Street	D	D	-1	-4	0	-5	Fail	Pass	D	D	-2	-3	0	-5	Fail	Pass	C	C	-4	-5	0	-9	Pass	NA	0	0	0	0	0	0	0	Pass	NA

Table 10B-19. New Jersey Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	14th Street / Holland Tunnel (E-W) & Marin Boulevard (N-S)	E	D	3181	2888	Fail	Pass	D	D	3052	2574	Fail	Pass	E	E	2962	2944	Fail	Pass	0	0	0	0	Pass	NA
4	14th Street (E-W) & Jersey Avenue (N-S)	D	D	4689	4396	Fail	Pass	C	C	3738	3260	Pass	NA	E	E	5664	5646	Fail	Pass	0	0	0	0	Pass	NA
5	12th Street (E-W) & Jersey Avenue (N-S)	F	E	3772	3694	Fail	Pass	D	D	2687	2586	Fail	Pass	E	E	3749	3609	Fail	Pass	0	0	0	0	Pass	NA
8	12th Street/Holland Tunnel (E-W) & Marin Boulevard (N-S)	E	D	3085	3007	Fail	Pass	C	C	2577	2476	Pass	NA	C	C	3576	3436	Pass	NA	0	0	0	0	Pass	NA

Table 10B-20. New Jersey Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM SCREEN		LN LOS		LN INCREMENT			LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	LOS	HDDT	NB	BD	MT	BUS	HT	LOS	HDDT
1	14th Street / Holland Tunnel (E-W) & Marin Boulevard (N-S)	E	D	-15	-7	0	-22	Fail	Pass	D	D	-56	-3	-3	-62	Fail	Pass	E	E	0	0	0	Fail	Pass	0	0	0	0	0	Pass	NA
4	14th Street (E-W) & Jersey Avenue (N-S)	D	D	-10	-7	0	-17	Fail	Pass	C	C	-45	-2	-3	-50	Pass	NA	E	E	0	0	0	Fail	Pass	0	0	0	0	0	Pass	NA
5	12th Street (E-W) & Jersey Avenue (N-S)	F	E	-5	-3	0	-8	Fail	Pass	D	D	-3	-1	0	-4	Fail	Pass	E	E	-2	-3	0	Fail	Pass	0	0	0	0	0	Pass	NA
8	12th Street/Holland Tunnel (E-W) & Marin Boulevard (N-S)	E	D	-6	-2	0	-8	Fail	Pass	C	C	-5	0	0	-5	Pass	NA	C	C	-2	-2	0	Pass	NA	0	0	0	0	0	Pass	NA

Table 10B-21. West Side Highway/Route 9A Study Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN		
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	HDDT
1	24th Street & 12th Ave	C	C	4133	4005	Pass	NA	C	C	3484	3350	Pass	NA	C	C	4976	4711	Pass	NA	C	C	3235	2966	Pass	NA	NA

Table 10B-22. West Side Highway/Route 9A Study Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV	AM SCREEN		MD LOS		MD INCREMENT			MD HDDV	MD SCREEN		PM LOS		PM INCREMENT			PM HDDV	PM SCREEN		LN LOS		LN INCREMENT			LN HDDV	LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1	24th Street & 12th Ave	C	C	-5	-3	0	-8	Pass	NA	C	C	-4	-4	0	-8	Pass	NA	C	C	-5	-3	0	-8	Pass	NA	C	C	-4	-3	-2	-9	Pass	NA

Table 10B-23. Little Dominican Republic Area - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	W 179th St & Broadway	C	C	813	823	Pass	Pass	C	C	1081	1142	Pass	Pass	C	C	1117	1144	Pass	Pass	0	0	0	0	Pass	Pass

Table 10B-24. Little Dominican Republic Area - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV		AM SCREEN		MD LOS		MD INCREMENT			MD HDDV		MD SCREEN		PM LOS		PM INCREMENT			PM HDDV		PM SCREEN		LN LOS		LN INCREMENT			LN HDDV		LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1	W 179th St & Broadway	C	C	1	5	0	6	Pass	NA	C	C	0	0	0	0	0	0	Pass	NA	C	C	0	0	0	0	0	Pass	NA			0	0	0	0	0	Pass	NA

Table 10B-25. Lower Eastside - No-Action Alternative vs. CBD Tolling Alternative Carbon Monoxide Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM VOLUME		AM SCREEN		MD LOS		MD VOLUME		MD SCREEN		PM LOS		PM VOLUME		PM SCREEN		LN LOS		LN VOLUME		LN SCREEN	
		NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME	NB	BD	NB	BD	LOS	10% VOLUME
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	C	C	1076	1026	Pass	Pass	D	C	1050	798	Pass	Pass	D	C	1146	900	Pass	Pass	0	0	0	0	Pass	Pass
2	Chatham Square & E Broadway	C	C	791	741	Pass	Pass	C	D	885	633	Fail	Pass	D	D	1026	780	Fail	Pass	0	0	0	0	Pass	Pass
3	Chatham Square/Bowery & Division St	B	B	816	766	Pass	Pass	B	B	845	593	Pass	Pass	B	C	1096	850	Pass	Pass	0	0	0	0	Pass	Pass

Table 10B-26. Lower Eastside - No-Action Alternative vs. CBD Tolling Alternative Particulate Matter Screening

INTERSECTION #	INTERSECTION NAME	AM LOS		AM INCREMENT			AM HDDV		AM SCREEN		MD LOS		MD INCREMENT			MD HDDV		MD SCREEN		PM LOS		PM INCREMENT			PM HDDV		PM SCREEN		LN LOS		LN INCREMENT			LN HDDV		LN SCREEN	
		NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT	LOS	HDDT	NB	BD	MT	BUS	HT	TOTAL	LOS	HDDT
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	C	C	-5	-2	0	-7	Pass	NA	D	C	-22	-10	0	-32	Pass	NA	D	C	-19	-8	0	-27	Pass	NA	0	0	0	0	0	0	0	0	0	0	Pass	NA
2	Chatham Square & E Broadway	C	C	-6	-3	0	-9	Pass	NA	C	D	-28	-12	0	-40	Fail	Pass	D	D	-27	-12	0	-39	Fail	Pass	0	0	0	0	0	0	0	0	0	0	Pass	NA
3	Chatham Square/Bowery & Division St	B	B	-2	-1	0	-3	Pass	NA	B	B	-6	-4	0	-10	Pass	NA	B	C	-9	-5	0	-14	Pass	NA	0	0	0	0	0	0	0	0	0	0	Pass	NA

Table 10B-27. Maximum Truck Changes on Highway Links with Project – All Tolling Scenarios

WORST-CASE SCENARIO	COUNTY	LINK #	ROADWAY	EJ COMMUNITY	MAXIMUM CHANGE IN TRUCKS	AADT - NO ACTION	AADT - SCENARIO	TOTAL TRUCKS - NO ACTION	TOTAL TRUCKS - SCENARIO	% TRUCKS - NO ACTION	% TRUCKS - SCENARIO
E	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	2,125	72,057	79,003	7,467	9,592	10%	12%
E	Queens	64851	TRIBOROUGH BRIDGE	yes	2,125	72,148	79,094	7,467	9,592	10%	12%
E	Queens	64831	TRIBOROUGH BRIDGE	yes	1,991	67,666	81,185	8,044	10,035	12%	12%
E	New York	64916	TRIBOROUGH BRIDGE (SOUTH) - S	yes	1,991	67,666	81,185	8,044	10,035	12%	12%
D	Queens	64851	TRIBOROUGH BRIDGE	yes	1,767	72,148	79,215	7,467	9,234	10%	12%
D	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	1,767	72,057	79,124	7,467	9,234	10%	12%
D	Queens	64831	TRIBOROUGH BRIDGE	yes	1,712	67,666	80,531	8,044	9,756	12%	12%
D	New York	64916	TRIBOROUGH BRIDGE (SOUTH) - S	yes	1,712	67,666	80,531	8,044	9,756	12%	12%
F	Queens	64851	TRIBOROUGH BRIDGE	yes	1,606	72,148	79,557	7,467	9,073	10%	11%
F	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	1,606	72,057	79,465	7,467	9,073	10%	11%
E	New York	64926	I 278	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	New York	90365	TRIBOROUGH BRIDGE	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	New York	64925	TRIBOROUGH BRIDGE	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	Bronx	64930	TRIBOROUGH BRIDGE (NORTH) - N	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	New York	64931	I 278	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	Bronx	64940	TRIBORO BR	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	Queens	220948	GRAND CENTRAL PKY	yes	1,543	48,951	54,546	5,358	6,901	11%	13%
D	New York	64926	I 278	yes	1,530	42,009	44,709	6,554	8,084	16%	18%
D	New York	90365	TRIBOROUGH BRIDGE	yes	1,530	42,009	44,709	6,554	8,084	16%	18%
D	New York	64926	I 278	yes	1,530	42,009	44,709	6,554	8,084	16%	18%

Table 10B-28. Maximum Average Annual Daily Traffic (AADT) on Highway Links with Project – All Tolling Scenarios

WORST-CASE SCENARIO	COUNTY	LINK #	ROADWAY	EJ COMMUNITY	AADT - NO ACTION	AADT - SCENARIO	TRUCKS - NO ACTION	TRUCKS - SCENARIO	MAXIMUM CHANGE IN TRUCKS	% TRUCKS - NO ACTION	% TRUCKS - SCENARIO
C	Bergen	268133	I-95	yes	124,642	130,713	18,019	18,421	401	14.5%	14.1%
E	Bergen	268133	I-95	yes	124,642	130,668	18,019	18,421	401	14.5%	14.1%
F	Bergen	268133	I-95	yes	124,642	130,461	18,019	18,421	401	14.5%	14.1%
D	Bergen	268133	I-95	yes	124,642	130,461	18,019	18,421	401	14.5%	14.1%
B	Bergen	268133	I-95	yes	124,642	129,686	18,019	18,421	401	14.5%	14.2%
A	Bergen	268133	I-95	yes	124,642	128,575	18,019	18,421	401	14.5%	14.3%
C	Queens	64554	VAN WYCK EXPY	yes	128,793	127,045	5,664	5,703	39	4.4%	4.5%
C	Bergen	268077	I-95	yes	120,803	126,821	17,101	17,517	416	14.2%	13.8%
E	Bergen	268077	I-95	yes	120,803	126,656	17,101	17,517	416	14.2%	13.8%
F	Bergen	268077	I-95	yes	120,803	126,645	17,101	17,517	416	14.2%	13.8%
D	Bergen	268077	I-95	yes	120,803	126,416	17,101	17,517	416	14.2%	13.9%
B	Bergen	268077	I-95	yes	120,803	126,029	17,101	17,517	416	14.2%	13.9%
A	Bergen	268077	I-95	yes	120,803	124,622	17,101	17,517	416	14.2%	14.1%
A	Queens	64564	VAN WYCK EXPY	yes	123,598	123,416	4,731	4,850	119	3.8%	3.9%
B	Bergen	268131	I-95	yes	116,685	123,100	16,114	16,514	400	13.8%	13.4%
A	Bergen	268131	I-95	yes	116,685	122,596	16,114	16,514	400	13.8%	13.5%
F	Queens	64564	VAN WYCK EXPY	yes	123,598	122,259	4,731	4,850	119	3.8%	4.0%
C	Queens	64564	VAN WYCK EXPY	yes	123,598	122,250	4,731	4,850	119	3.8%	4.0%
D	Queens	64564	VAN WYCK EXPY	yes	123,598	122,200	4,731	4,850	119	3.8%	4.0%
E	Queens	64564	VAN WYCK EXPY	yes	123,598	121,845	4,731	4,850	119	3.8%	4.0%
J	Queens	64564	VAN WYCK EXPY	yes	123,598	121,602	4,731	4,850	119	3.8%	4.0%
B	Queens	63972	VAN WYCK EXPY	yes	119,688	119,497	4,081	4,101	21	3.4%	3.4%
B	Queens	64564	VAN WYCK EXPY	yes	123,598	119,188	4,731	4,850	119	3.8%	4.1%
C	Bergen	268131	I-95	yes	116,685	118,593	16,114	16,514	400	13.8%	13.9%
E	Bergen	268131	I-95	yes	116,685	117,737	16,114	16,514	400	13.8%	14.0%
E	Queens	64289	LONGISLAND EXPY	yes	117,103	117,281	6,571	6,672	102	5.6%	5.7%
F	Queens	64289	LONGISLAND EXPY	yes	117,103	117,108	6,571	6,672	102	5.6%	5.7%
A	Bergen	266111	SR 4	yes	117,502	117,077	7,057	7,062	5	6.0%	6.0%

10C,
Highway Link Particulate Matter Hot-Spot
Detailed Assessment (Methodology,
Interagency Consultation, and Results)

1 Particulate Matter Hot Spot Analysis Methodology

1.1 INTRODUCTION

The Triborough Bridge and Tunnel Authority (TBTA), which is an affiliate of MTA; the New York State Department of Transportation (NYSDOT); and the New York City Department of Transportation (NYCDOT) (collectively, the Project Sponsors) are proposing a program, known as the Central Business District Tolling Program (CBD Tolling Program or the Project), to address congestion in the Manhattan Central Business District.

The Project purpose is to reduce traffic congestion in the Manhattan CBD in a manner that will generate revenue for future transportation improvements, pursuant to acceptance into the Federal Highway Administration's (FHWA's) Value Pricing Pilot Program (VPPP). The Project would address the need to reduce vehicle congestion in the Manhattan CBD and create a new local, recurring funding source for MTA's capital projects.

The Project was included in the regional emissions analysis for NYMTC's current Transportation Conformity Determination, adopted on August 19, 2021, and is included in NYMTC's current FFY 2022-2050 Regional Transportation Plan, adopted on September 9, 2021.

1.2 PURPOSE OF THIS DOCUMENT

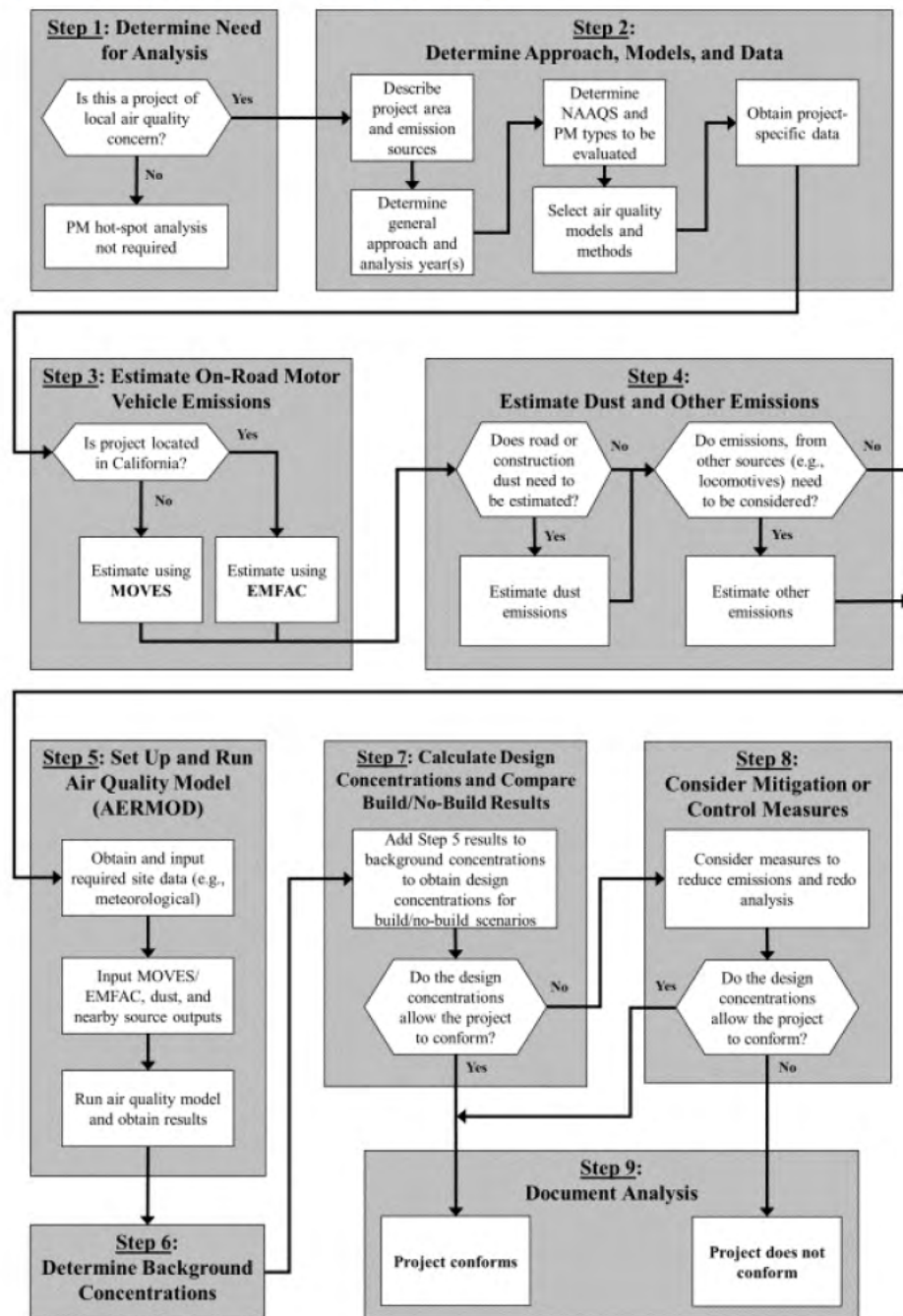
An effect of the Project includes truck diversions from the CBD to highways surrounding Manhattan – especially those going over the RFK Bridge into the South Bronx and over the George Washington Bridge into New Jersey. This is mainly due to truck traffic to/from Long Island and Pennsylvania that will re-route due to the tolling in the CBD.

As such, the Project Sponsors, in coordination with NYMTC staff, are meeting with the Interagency Consultation Group (ICG) on April 19, 2022 (Refer to Appendix A for ICG Presentation). This meeting is to discuss the PM₁₀ and PM_{2.5} hot-spot analysis that will be undertaken to determine potential impacts from the truck diversions on highway segments. This analysis will be performed in accordance with the United States Environmental Protection Agency (USEPA) *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas* (EPA-420-B-21-037, October 2021).¹

This **PM Hot-Spot Analysis Methodology** identifies the process for conducting a project-specific hot-spot analysis following USEPA's nine-step process as summarized in Exhibit 3-1 of that document, presented here in Figure 1-1.

¹ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1013C6A.pdf>

Figure 1-1 Overview of a PM Hot-Spot Analysis



Source: USEPA, "PM Hot-spot Guidance: Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas" (EPA-420-B-21-037, October 2021), page 19.

All modeling procedures will follow the applicable guidance in NYSDOT *Environmental Procedures Manual* (EPM) and will be reviewed and approved for use by the ICG prior to the start of the analysis. For the purposes of this project, it is assumed that three analysis sites will require a detailed PM microscale analysis and that the sites will be analyzed for the No Action Alternative as well as for the worst-case scenario of the Action Alternative.

1.3 PROPOSED NINE-STEP PM HOT-SPOT ANALYSIS

Step 1. Determine Need for a PM Hot-Spot Analysis

A PM_{2.5} and PM₁₀ (PM) microscale/hotspot analysis will be conducted for NEPA purposes to address public concerns regarding air quality and shall be performed in a manner consistent with USEPA guidance for PM hotspot analyses.

Step 2. Determine Approach, Models and Data

a. Approach

Three approximately 1000' long highway-segment locations have been selected for detailed analysis. These sites demonstrate an increase in diesel truck traffic due to the project and were chosen for detailed analysis based upon either highest Annual Average Daily Traffic (AADT), community concern, or the largest increase in trucks between the No Action and Action Alternatives. Details of the site selection can be found in Appendix A. The location of the nearest sensitive receptors at these selected sites can be found in Appendix B. The analysis sites are listed below and shown in Figure 1-2, Figure 1-3, and Figure 1-4. As shown in these figures, all the red traffic links within the ovals will be included in the analysis. The analysis locations are as follows:

1. I-95 west of the George Washington Bridge, Scenario C

- Highest AADT in all scenarios
- New Jersey location
- EJ community

2. Cross Bronx Expressway @ Macombs Road, Scenario B

- Community concern
- Bronx location
- EJ community

3. RFK (Triborough) Bridge Queens Approach, Scenario E

- Highest truck increase across all scenarios
- Queens location
- EJ community

b. Analysis Years

The analysis is being conducted for opening year conditions (2023) with and without the project. This will capture the immediate effects of the project, particularly with regards to truck diversions on highways in the area. In addition, based on the regional emission burden analysis, which accounts for traffic growth rates and vehicle emission rates, 2023 is predicted to be the year of highest emissions for PM_{2.5} emissions.

c. PM Emissions

The PM₁₀ and PM_{2.5} hot-spot analyses will include only directly emitted PM₁₀ and PM_{2.5} emissions. PM_{2.5} precursors are not considered in PM hot-spot analyses, since precursors take time at the regional level to form into secondary PM. Exhaust, brake wear, and tire wear emissions from on-road vehicles are included in the project's PM₁₀ and PM_{2.5} analyses. For these analyses, both running and crankcase running exhaust will be considered because start exhaust is unlikely to occur on the roadways included in the model domain.

Re-entrained road dust will be included in the PM₁₀ analysis because the New York State Implementation Plan previously identified that such emissions contribute to PM₁₀ concentrations. Road dust will not be included in the PM_{2.5} analysis.

d. Model

The analysis will be performed using the EPA's MOVES3 emissions model, AP-42 and the AERMOD dispersion model (currently version 21112).

e. Data

MOVES input parameters have been obtained from NYSDOT and NYSDEC. It will be confirmed that these parameters are still the latest and best input parameters to be used for the project. Project-specific base traffic data, including volumes, average vehicle speeds, and facility type for each roadway section in the project area, will also be obtained from the project team. Vehicle volumes will be obtained for AM, midday, PM, and overnight periods. The appropriate hourly meteorological data will be obtained in the format required for use in AERMOD, as provided by NYSDEC. The meteorological data will be representative of the terrain, climate, and topography of the study area. It is currently assumed that surface meteorological data and upper air data from LaGuardia Airport, NY will be used.

Step 3. Estimate On-Road Vehicle Emissions

On-road vehicle emissions will be estimated using MOVES. MOVES input parameters will be provided by NYSDOT and NYSDEC. MOVES input relies on link-specific data. The PM emissions vary by time of day and time of year. Volume and speed data for each link will be obtained from the traffic analysis being conducted for this project for AM, midday, PM, and overnight

periods. For each intersection and analysis year, MOVES will be run four (4) times (AM, PM, midday, and overnight) for one quarter. The month selected in MOVES will coincide with the month with seasonal fuel that results in highest PM emissions. For every source, a set of four (4) emission factors in units of grams per mile will be developed for use for each of the analysis years and for each pollutant. Based on the traffic analysis for the Proposed Project, the data will be allocated into the time periods shown in Table 1-1.

Table 1-1 Proposed Traffic Analysis Time Period Combinations

Name	Description	From	To	# of Hours
Period 1	Overnight	8:00 PM	6:00 AM	10
Period 2	AM	6:00 AM	10:00 AM	4
Period 3	Midday	10:00 AM	4:00 PM	6
Period 4	PM	4:00 PM	8:00 PM	4

Step 4. Estimate Emissions from Road Dust, Construction and Additional Sources

Road dust emissions will be included in the analysis, as described in step 2(b).

No additional sources of PM emissions will be included. It is assumed that PM concentrations due to any other nearby emissions sources will be included in the ambient monitor values used for background concentrations. In addition, the Proposed Project is not expected to result in changes to emissions from nearby sources.

Step 5. Select an Air Quality Model, Data Inputs and Receptors

a. Model

The USEPA's AERMOD air dispersion model, currently version 21112, will be used to estimate concentrations of PM due to project operations. The model uses traffic data, emission factor data, and meteorological data to estimate concentrations of PM at a series of receptors. For each modeled alternative, the model setup will include a series of links, or roadway segments, for and approximately 1,000 feet segment of the highway. The analysis will include adjacent service roads and cross-streets, as presented in Step 2.

b. Data Inputs

Link-specific inputs include length, mixing zone width, volume, emission factor, initial vertical dimension and vertical dispersion coefficient, as well as release height above ground. The project team shall provide volume and speed data on the affected roadway links for the Action and No Action condition for the agreed-upon analysis year and scenario. The vehicle mix, including the percentage of medium trucks, heavy trucks and buses, along with roadway grade (slope) on the affected roadway links will also be obtained. Meteorological input files will be

obtained from NYSDEC. As recommended in EPA's "Guideline on Air Quality Models" (Appendix W to 40 CFR Part 51), five consecutive years of the most recent and readily available meteorological data will be used for the dispersion modeling analysis. It is currently assumed that meteorological data from LaGuardia Airport will be used. For each alternative, AERMOD will be run for each of the five years of meteorological data.

c. Receptors

Receptors will be placed to estimate the highest concentrations of PM_{10} and $PM_{2.5}$ to determine any possible violations of the NAAQS. Highest concentrations are expected to occur near the areas with the highest-volume roadways. Receptors will be placed in a grid, as applicable. Pursuant to the NYSDOT's TEM and USEPA guidance, receptors will be placed five meters (approximately 16 feet) from the source of emissions, with a grid of receptors spaced at 25 meters (approximately 82 feet) nearer to the main roadway sources and 50 meters (approximately 164 feet) farther from these sources. Receptors will be placed up to 300 meters (approximately 1,000 feet) from the source of emissions.

Figure 1-5 presents a sample receptor grid.

Figure 1-5 Sample Receptor Grid



Step 6. Determine Background Concentrations from Nearby and Other Sources

The applicable background concentrations will be obtained from EPA's design value database (<https://www.epa.gov/air-trends/air-quality-design-values>). The background value will be added to the AERMOD modeled design values for comparison to the NAAQS. Currently these values are $22 \mu\text{g}/\text{m}^3$ for 24 hour $PM_{2.5}$ and $8.7 \mu\text{g}/\text{m}^3$ for annual $PM_{2.5}$. EPA does not currently provide PM_{10} design values for the area due to incomplete information. As such, the highest

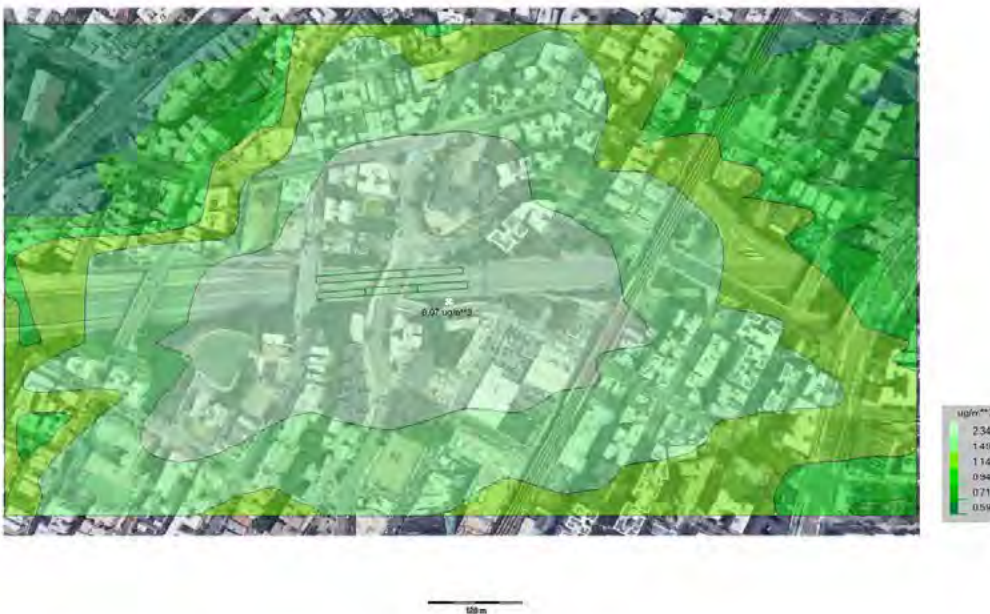
maximum annual average at the closest PM₁₀ monitor to the site (PS 124) 43 ug/m³ will be applied.

Step 7. Calculate Design Values and Determine Conformity

The model results (Step 5) will be added to the background concentration(s) (Step 6) for both the No Action and Action alternatives to calculate the design values. The maximum design values for No Action and Action alternatives will be calculated using the steps outlined in EPA's PM hot-spot guidance, which are consistent with the statistical form of the National Ambient Air Quality Standards (NAAQS). The design values will be evaluated to determine the project's potential impacts on PM₁₀ and PM_{2.5} concentrations in the project area.

In addition to the maximum design values, contour maps will be created using the dispersion model results to demonstrate the relative concentrations at all receptors included in the analysis. Figure 1-6 presents a sample contour diagram.

Figure 1-6 Sample Contours



Step 8. Consider Mitigation or Control Measures

If the project results in any violation of NAAQS, mitigation or control measures to reduce emissions in the project area may be considered by the project sponsors. If such measures are considered, additional modeling will need to be completed and new design values calculated to ensure that conformity requirements are met. Mitigation measures, which must include written commitments for implementation (40 CFR 93.125), include the following:

- a. Retrofitting, replacing vehicles/engines, and using cleaner fuels;
- b. Reducing idling;
- c. Redesigning the transportation project itself;
- d. Controlling fugitive dust; and
- e. Controlling other sources of emissions.

Step 9. Document the PM Hot-Spot Analysis

The PM hotspot analysis and results will be documented in an Air Quality Technical Report. Due to the large volume of input and output files created for this analysis, these files will be available electronically.

Appendix A

Air Quality Interagency Consultation Presentation

April 19, 2022



Central Business District Tolling Program

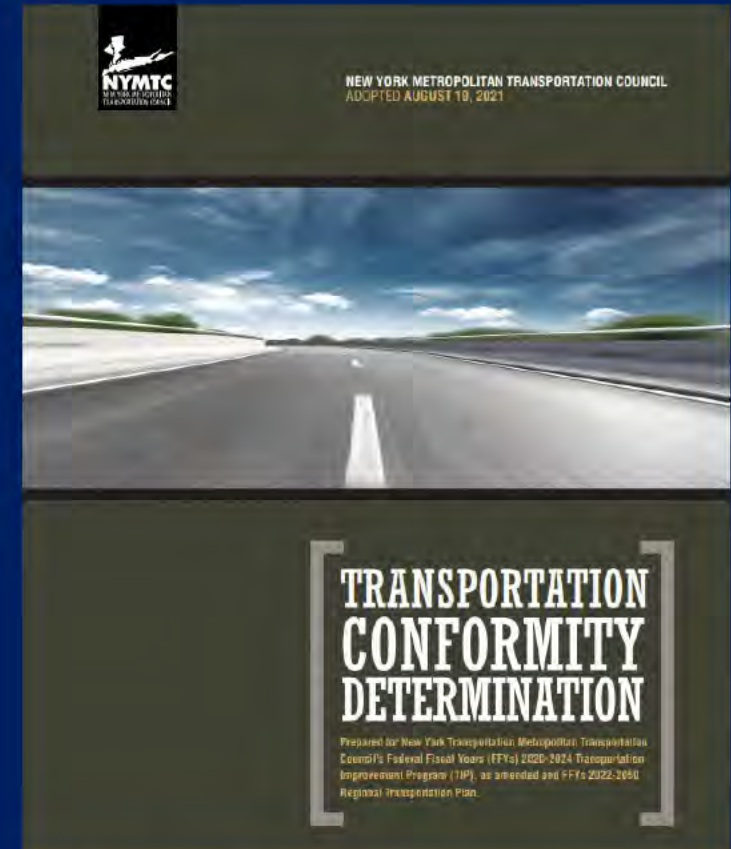
Air Quality Interagency Consultation
April 19, 2022



1

Regional Conformity

- The Central Business District Tolling Program (CBDTP) was included in the regional emissions analysis for NYMTC's current Transportation Conformity Determination, adopted on August 19, 2021.
- The CBDTP is included in NYMTC's current FFY 2022-2050 Regional Transportation Plan, adopted on September 9, 2021.



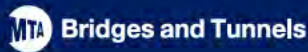
Project-Level Conformity

Outcomes from 8/29/19 Interagency Consultation Group (ICG) meeting:

- **Project-level hot-spot screening** will be conducted for the CBDTP as part of the environmental review process.
 - Environmental Process will look at Hot Spot Analysis for CO or PM.
 - Screening analysis based on level of service (LOS) and traffic volume.
- If a project-level analysis is needed, the project team will meet with ICG to discuss the approach.

Projects Requiring a Quantitative PM_{2.5} or PM₁₀ Hot-Spot Analysis

Project Type	Assessment of Applicability to the CBDTP
New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles	Not Applicable
Projects affecting intersections that are at Level of Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project	Not Applicable
New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location	Not Applicable
Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location	Not Applicable
Projects in or affecting locations, areas, or categories of sites which are identified in the PM _{2.5} or PM ₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation	Not Applicable



Project-Level Conformity

- 98 intersections around the study area were screened in consultation with NYSDOT.
- For CO, intersections with a build Level of Service (LOS) of C or better **passed the screening**.
 - If the intersection was LOS D or below in the Action Alternative, the intersection was further screened by a 10 percent or more increase in traffic volume.
- For PM, intersections with a build Level of Service (LOS) of C or better **passed the screening**.
 - For intersections that demonstrated a LOS of D or worse under the Action Alternative, an hourly change of 10 or less heavy-duty diesel vehicles would not warrant further analysis.
- **All Intersections passed the CO and PM screening analyses.**



Preliminary - Recap of Tolling Scenarios

	Scenario					
	A	B	C	D	E	F
	Base Plan	Base Plan with Caps and Exemptions	Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	High Crossing Credits for Vehicles Using Tunnels to Access the CBD	High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions
Toll Level	Lowest	Low	Medium	High	Highest	Highest
Net Revenue Projections (\$/B)	\$1.06	\$0.83	\$1.11	\$1.34	\$1.48	\$1.02
Credits	None		Tolled CBD Crossings; Lower Credit	Tolled CBD Crossings; Higher Credit		All Manhattan; Higher Credit
Autos	1x Daily					
Taxis	Uncapped	1x Daily @ Auto Rate	Exempt	Uncapped	Exempt	1x Daily @ Auto Rate
FHVs	Uncapped	1x Daily @ Auto Rate	3x Daily @ Auto Rate	Uncapped	3x Daily @ Auto Rate	1x Daily @ Auto Rate
Trucks	Uncapped	2x Daily	Uncapped			1x Daily
Buses	Uncapped	Exempt	Uncapped		Transit: Exempt; Non-Transit: Uncapped	Exempt

5

Highway Link Analyses

- Since all intersections passed the screenings, and per agreement of the 2019 ICG, no detailed hotspot analysis were required.
- In response to concerns raised during community meetings, the team decided to analyze the effects of the link-level highway segments on localized communities – particularly on the Cross Bronx Expressway in the vicinity of Macombs Road and on the FDR Drive near 10th Street.
- Due to the changes in truck volumes at Macombs Road, a highway link PM microscale analysis was conducted to determine air quality effects of the project.
- As the FDR does not allow trucks, a PM analysis was not conducted. A CO screening at that location passed NYSDOT TEM's Volume Threshold Analysis.

Table 1: Cross Bronx Expressway Volumes at Macombs Road

Time Period	# Hours	No Action	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F
Cross Bronx Expressway Volumes at Macombs Road								
AM	4	39,205	39,975	40,003	39,613	39,757	40,235	39,703
MD	6	54,071	54,596	54,522	54,277	54,666	54,659	54,639
PM	4	44,092	44,297	44,046	44,332	44,213	44,063	44,438
NT	10	49,711	52,111	52,503	50,913	50,209	51,879	50,436
Total	24	187,079	190,980	191,075	189,135	188,845	190,836	189,267
Cross Bronx Expressway Truck Volumes at Macombs Road								
AM	4	7,003	7,045	7,063	6,926	7,089	7,029	7,156
MD	6	9,924	9,896	9,986	9,893	9,851	9,896	9,845
PM	4	3,923	3,927	3,988	3,936	4,057	3,977	3,937
NT	10	6,742	7,231	7,259	7,007	7,105	7,068	7,189
Total	24	27,592	28,100	28,296	27,762	28,102	27,970	28,128
Cross Bronx Expressway Truck Percentages at Macombs Road								
AM	4	18%	18%	18%	17%	18%	17%	18%
MD	6	18%	18%	18%	18%	18%	18%	18%
PM	4	9%	9%	9%	9%	9%	9%	9%
NT	10	14%	14%	14%	14%	14%	14%	14%
Total	24	14.7%	14.7%	14.8%	14.7%	14.9%	14.7%	14.9%
Cross Bronx Expressway Truck Volume Changes at Macombs Road								
AM	4	-	42	60	-77	85	25	153
MD	6	-	-28	63	-31	-73	-27	-78
PM	4	-	5	65	13	134	54	15
NT	10	-	489	517	265	363	326	447
Total	24	-	509	704	170	510	378	536

Source: WSP



PM Microscale Analysis at Cross Bronx Expressway and Macombs Road (Analysis Year 2023)

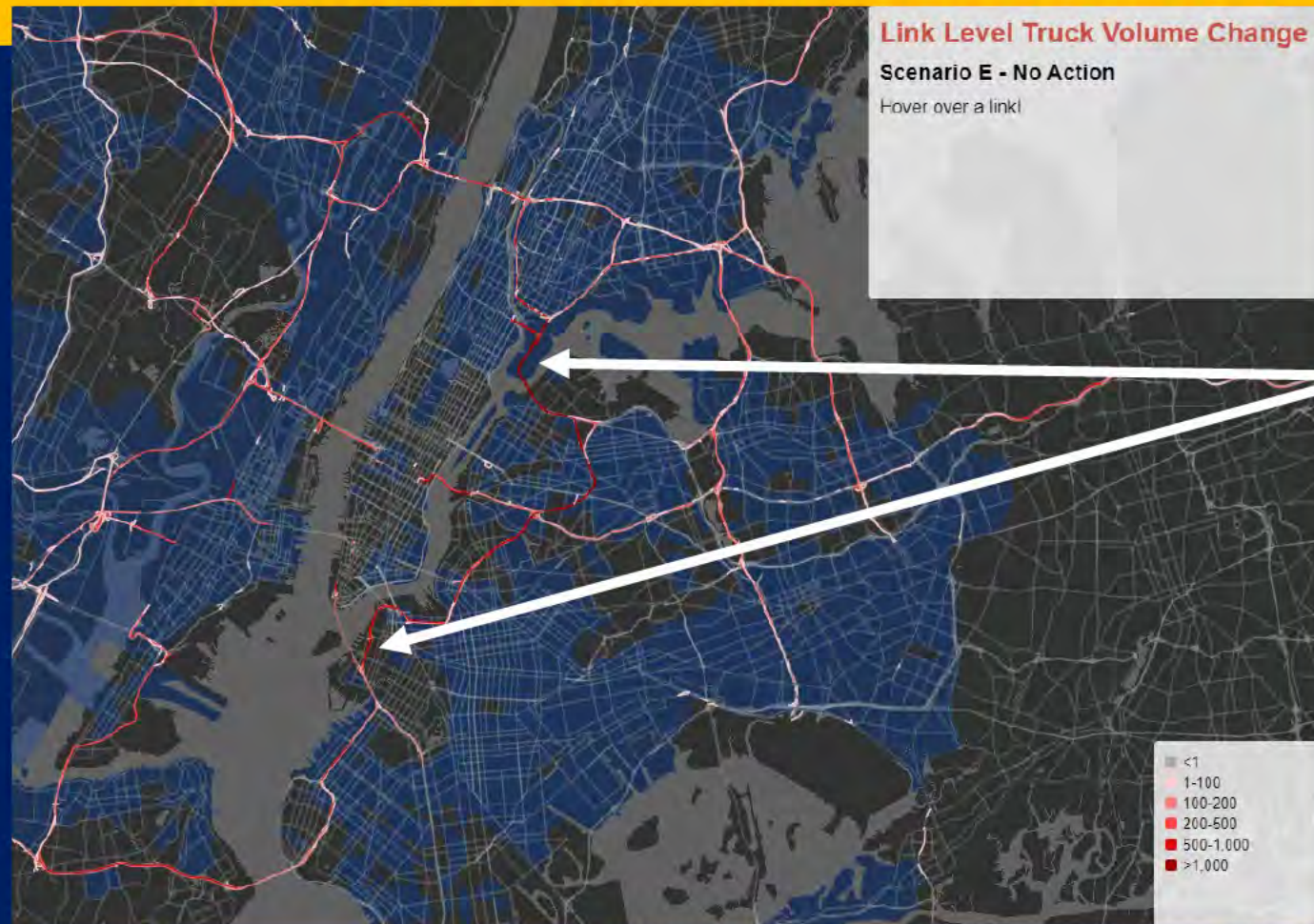
As shown, the levels are below the NAAQS.

	PM ₁₀ (24-hr)		PM _{2.5} (24-hr)		PM _{2.5} (annual)	
	No Action	Scenario B	No Action	Scenario B	No Action	Scenario B
Model result	67	70	7.6	8.1	1.9	2
Background	43		22		8.7	
Total	110	113	29.6	30.1	10.6	10.7
NAAQS (µg/m³)	150		35		12	



AERMOD PM_{2.5} 24-hour contours, Scenario B

Circumferential Truck Diversions



A more in-depth analysis of truck movements was then conducted.

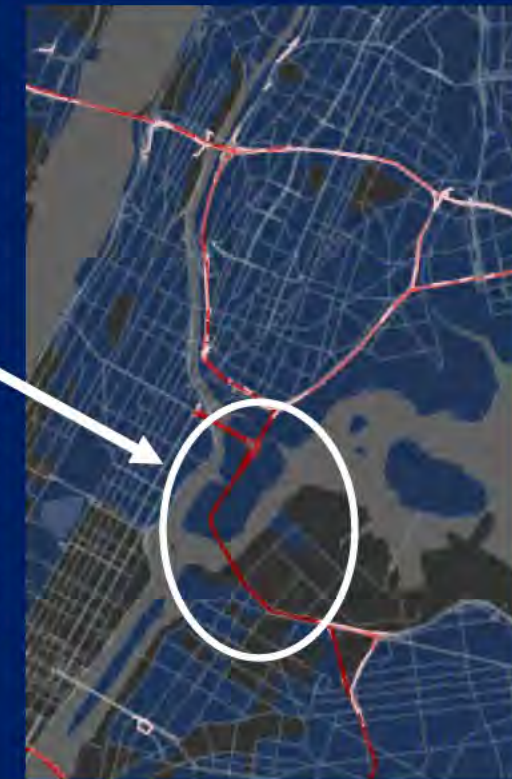
As shown by the darker red links, the tolling scenarios show varying degrees of truck diversions around Manhattan.

This is mainly due to truck traffic to/from Long Island and Pennsylvania.

Note: Blue shaded areas are EJ communities

Highway Link Analysis – Maximum Truck Changes (Top 20 Highway Links)

Worst-Case Scenario	County	link #	Roadway	EJ Community	Maximum Daily Change in Trucks	AADT - No Action	AADT - Scenario	Total Trucks - No Action	Total Trucks - Scenario	% Trucks - No Action	% Trucks - Scenario
E	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	2,125	72,057	79,003	7,467	9,592	10%	12%
E	Queens	64851	TRIBOROUGH BRIDGE	yes	2,125	72,148	79,094	7,467	9,592	10%	12%
E	Queens	64831	TRIBOROUGH BRIDGE	yes	1,991	67,666	81,185	8,044	10,035	12%	12%
E	New York	64916	TRIBOROUGH BRIDGE (SOUTH) - S	yes	1,991	67,666	81,185	8,044	10,035	12%	12%
D	Queens	64851	TRIBOROUGH BRIDGE	yes	1,767	72,148	79,215	7,467	9,234	10%	12%
D	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	1,767	72,057	79,124	7,467	9,234	10%	12%
D	Queens	64831	TRIBOROUGH BRIDGE	yes	1,712	67,666	80,531	8,044	9,756	12%	12%
D	New York	64916	TRIBOROUGH BRIDGE (SOUTH) - S	yes	1,712	67,666	80,531	8,044	9,756	12%	12%
F	Queens	64851	TRIBOROUGH BRIDGE	yes	1,606	72,148	79,557	7,467	9,073	10%	11%
F	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	1,606	72,057	79,465	7,467	9,073	10%	11%
E	New York	64926	I 278	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	New York	90365	TRIBOROUGH BRIDGE	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	New York	64925	TRIBOROUGH BRIDGE	yes	1,554	42,009	44,713	6,554	8,108	16%	18%
E	Bronx	64930	TRIBOROUGH BRIDGE (NORTH) - N	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	New York	64931	I 278	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	Bronx	64940	TRIBORO BR	yes	1,552	45,875	47,691	6,711	8,263	15%	17%
E	Queens	220948	GRAND CENTRAL PKY	yes	1,543	48,951	54,546	5,358	6,901	11%	13%
D	New York	64926	I 278	yes	1,530	42,009	44,709	6,554	8,084	16%	18%
D	New York	90365	TRIBOROUGH BRIDGE	yes	1,530	42,009	44,709	6,554	8,084	16%	18%
D	New York	64926	I 278	yes	1,530	42,009	44,709	6,554	8,084	16%	18%



Notes: map shows Scenario E truck changes
Blue shaded areas are EJ communities

The project team assessed the truck data to determine those links with maximum truck changes across all scenarios. This was done to identify “worst case” locations to perform highway link PM analyses.

Note: one-way directional links



Highway Link Analysis - Max Truck Changes by County

Worst-Case Scenario	County	link #	Roadway	EJ Community	Maximum Daily Change in Trucks	AADT - No Action	AADT - Scenario	Total Trucks - No Action	Total Trucks - Scenario	% Trucks - No Action	% Trucks - Scenario
E	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	2,125	72,057	79,003	7,467	9,592	10.4%	12.1%
E	Queens	64851	TRIBOROUGH BRIDGE	yes	2,125	72,148	79,094	7,467	9,592	10.3%	12.1%
E	Bronx	64930	TRIBOROUGH BRIDGE (NORTH) - N	yes	1,552	45,875	47,691	6,711	8,263	14.6%	17.3%
D	Kings	90378	BROOKLYN BATTERY TUNNEL	no	1,277	23,795	43,802	1,796	3,073	7.5%	7.0%
E	Nassau	283052	LIE HOV WB	no	726	8,713	12,305	381	1,107	4.4%	9.0%
D	Bergen	246640	George Washington Bridge	yes	722	86,255	92,162	19,274	19,996	22.3%	21.7%
E	Richmond	90359	I 278	no	722	106,278	113,169	6,294	7,016	5.9%	6.2%
F	Fairfield	2601002	I 95 HOV	no	588	14,441	17,358	1,331	1,919	9.2%	11.1%
E	Hudson	267169	Tonnele Av	yes	540	90,326	93,367	4,460	5,000	4.9%	5.4%
A	Somerset	255656	I-78 to I-287 ramp	no	530	20,965	22,517	4,223	4,752	20.1%	21.1%
J	Suffolk	223379	LIE WB	yes	492	5,071	10,362	330	822	6.5%	7.9%
E	Rockland	246472	I 287	yes	423	35,214	37,193	5,577	6,001	15.8%	16.1%
E	Morris	256254	I 287	no	380	33,856	34,618	6,268	6,647	18.5%	19.2%
E	Union	246785	GOETHALS BRIDGE - WB	yes	347	27,265	30,664	2,533	2,880	9.3%	9.4%
E	Essex	266734	I-95 NB on-ramp	yes	311	5,773	5,915	1,141	1,452	19.8%	24.6%
F	Passaic	264358	I-80	yes	296	43,135	45,366	4,016	4,312	9.3%	9.5%
F	Westchester	77466	Westchester Ave Ramp	no	245	1,996	2,340	859	1,104	43.0%	47.2%
A	New Haven	239129	I-84 EB on-ramp	no	210	6,490	9,299	1,323	1,533	20.4%	16.5%
E	Middlesex	255463	I-287 EB	yes	157	38,414	38,461	4,557	4,713	11.9%	12.3%
B	Dutchess	244636	Rt 9 on-ramp	yes	123	8,395	8,263	373	496	4.4%	6.0%
F	Orange	222621	Rt 6 NB on-ramp	yes	46	10,229	10,877	550	596	5.4%	5.5%
F	Mercer	249007	Brunswick Pike	yes	32	65,793	66,105	6,145	6,177	9.3%	9.3%
A	Warren	256441	-	no	26	53,670	53,640	8,729	8,755	16.3%	16.3%
E	Hunterdon	254727	I-78 WB	no	16	51,603	51,453	8,693	8,709	16.8%	16.9%
E	Putnam	79212	I 684	no	16	35,206	34,957	3,870	3,886	11.0%	11.1%
D	Monmouth	251620	CR 18	no	15	9,051	9,027	1,561	1,576	17.2%	17.5%
B	Ocean	251116	I-195	no	11	19,610	19,697	2,616	2,627	13.3%	13.3%
J	Sussex	256644	-	no	6	44,360	44,304	3,570	3,576	8.0%	8.1%

Note: one-way directional links



10

The project team assessed the truck data to determine those links with maximum truck changes by county across all scenarios.

This was done to identify "worst case" locations to perform highway link PM analyses.

Highway Link Analysis - Maximum AADT

Worst-Case Scenario	County	link #	Roadway	EJ Community	AADT - No Action	AADT - Scenario	Trucks - No Action	Trucks - Scenario	Maximum Daily Change in Trucks	% Trucks - No Action	% Trucks - Scenario
C	Bergen	268133	I-95	yes	124,642	130,713	18,019	18,421	401	14.5%	14.1%
E	Bergen	268133	I-95	yes	124,642	130,668	18,019	18,421	401	14.5%	14.1%
F	Bergen	268133	I-95	yes	124,642	130,461	18,019	18,421	401	14.5%	14.1%
D	Bergen	268133	I-95	yes	124,642	130,461	18,019	18,421	401	14.5%	14.1%
B	Bergen	268133	I-95	yes	124,642	129,686	18,019	18,421	401	14.5%	14.2%
A	Bergen	268133	I-95	yes	124,642	128,575	18,019	18,421	401	14.5%	14.3%
C	Queens	64554	VAN WYCK EXPY	yes	128,793	127,045	5,664	5,703	39	4.4%	4.5%
C	Bergen	268077	I-95	yes	120,803	126,821	17,101	17,517	416	14.2%	13.8%
E	Bergen	268077	I-95	yes	120,803	126,656	17,101	17,517	416	14.2%	13.8%
F	Bergen	268077	I-95	yes	120,803	126,645	17,101	17,517	416	14.2%	13.8%
D	Bergen	268077	I-95	yes	120,803	126,416	17,101	17,517	416	14.2%	13.9%
B	Bergen	268077	I-95	yes	120,803	126,029	17,101	17,517	416	14.2%	13.9%
A	Bergen	268077	I-95	yes	120,803	124,622	17,101	17,517	416	14.2%	14.1%
A	Queens	64564	VAN WYCK EXPY	yes	123,598	123,416	4,731	4,850	119	3.8%	3.9%
B	Bergen	268131	I-95	yes	116,685	123,100	16,114	16,514	400	13.8%	13.4%
A	Bergen	268131	I-95	yes	116,685	122,596	16,114	16,514	400	13.8%	13.5%
F	Queens	64564	VAN WYCK EXPY	yes	123,598	122,259	4,731	4,850	119	3.8%	4.0%
C	Queens	64564	VAN WYCK EXPY	yes	123,598	122,250	4,731	4,850	119	3.8%	4.0%
D	Queens	64564	VAN WYCK EXPY	yes	123,598	122,200	4,731	4,850	119	3.8%	4.0%
E	Queens	64564	VAN WYCK EXPY	yes	123,598	121,845	4,731	4,850	119	3.8%	4.0%
J	Queens	64564	VAN WYCK EXPY	yes	123,598	121,602	4,731	4,850	119	3.8%	4.0%
B	Queens	63972	VAN WYCK EXPY	yes	119,688	119,497	4,081	4,101	21	3.4%	3.4%
B	Queens	64564	VAN WYCK EXPY	yes	123,598	119,188	4,731	4,850	119	3.8%	4.1%
C	Bergen	268131	I-95	yes	116,685	118,593	16,114	16,514	400	13.8%	13.9%
E	Bergen	268131	I-95	yes	116,685	117,737	16,114	16,514	400	13.8%	14.0%
E	Queens	64289	LONG ISLAND EXPY	yes	117,103	117,281	6,571	6,672	102	5.6%	5.7%
F	Queens	64289	LONG ISLAND EXPY	yes	117,103	117,108	6,571	6,672	102	5.6%	5.7%
A	Bergen	266111	SR 4	yes	117,502	117,077	7,057	7,062	5	6.0%	6.0%

Note: one-way directional links

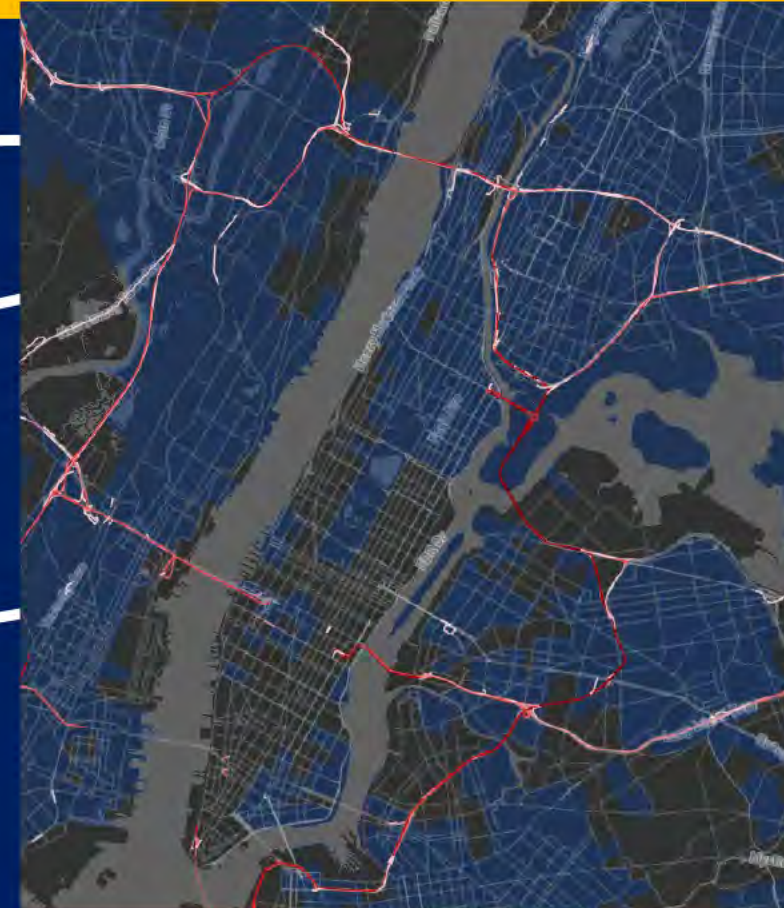


The project team also assessed traffic data to determine those links with maximum AADT by county across all scenarios.

This was done to identify "worst case" locations to perform highway link PM analyses.

Highway Link Analysis - PM Analysis Locations

- **I-95 west of the GWB, Scenario C**
 - Highest AADT in all scenarios
 - New Jersey location
 - EJ community
- ✓ **Cross Bronx @ Macombs, Scenario B**
 - Community concern
 - Scenario with highest truck increase at that location
 - Bronx location
 - EJ community
- **RFK (Triborough) Queens Approach, Scenario E**
 - Highest truck increase across all scenarios
 - Queens location
 - EJ community

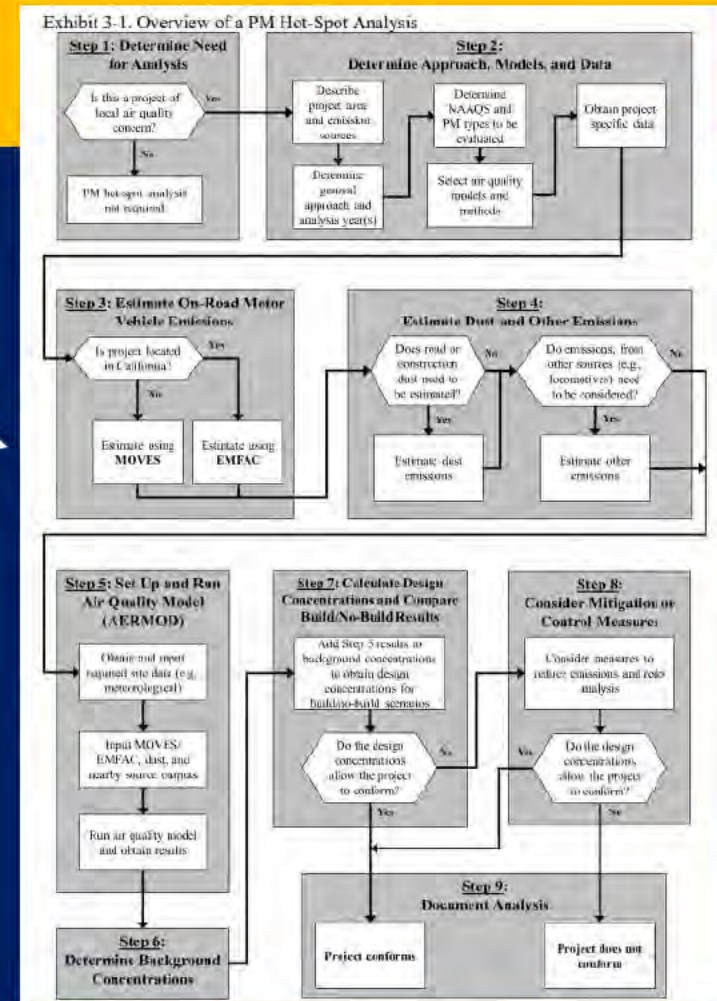


Notes: map shows Scenario E truck changes
Blue shaded areas are EJ communities



Action Items/Next Steps

- ICG concurrence on approach
 - Project team has provided draft methodology, following EPA's 9-step process, for ICG review
- ICG concurrence that no further consultation required if all levels are below NAAQS for all analyses
 - Findings for the additional locations will be circulated prior to release of EA

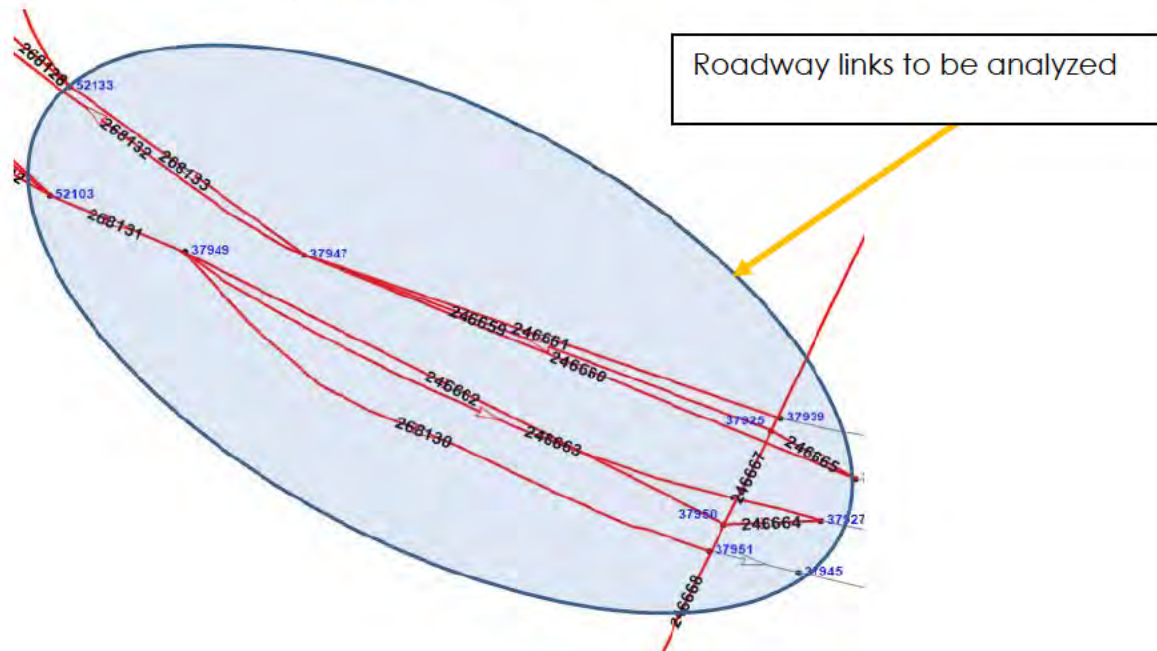


Appendix B

Nearest Sensitive Receptor Distances at Proposed Analysis Sites

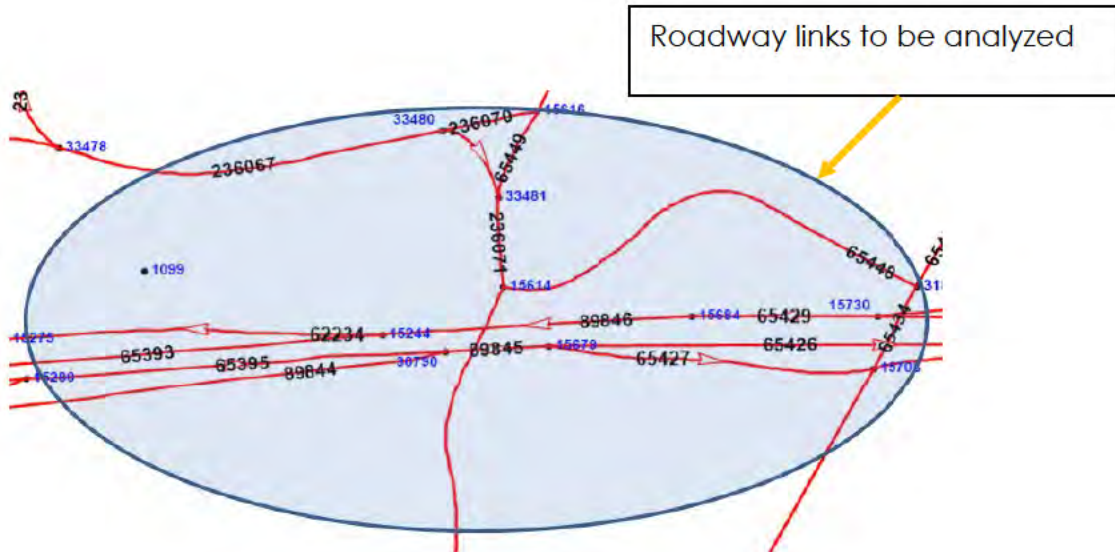
During the interagency consultation meeting on 4/19/22, it was requested that more information be provided regarding the distance from the roadway to the nearest sensitive receptor at each of the proposed analysis sites. As shown in the figures below, the nearest sensitive receptors range from approximately 18' to 43' from roadway segments, depending on the analysis site. In addition to these receptors, a grid pattern of receptors, as per EPA guidance and detailed in the methodology, will also be placed at each analysis location.

Site 1 - I-95 west of the GWB, Scenario C



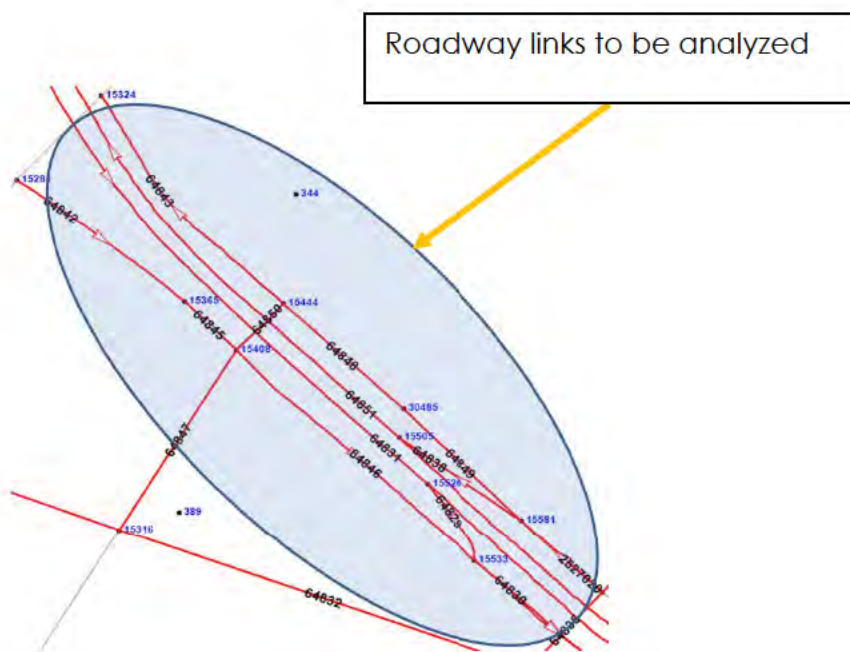
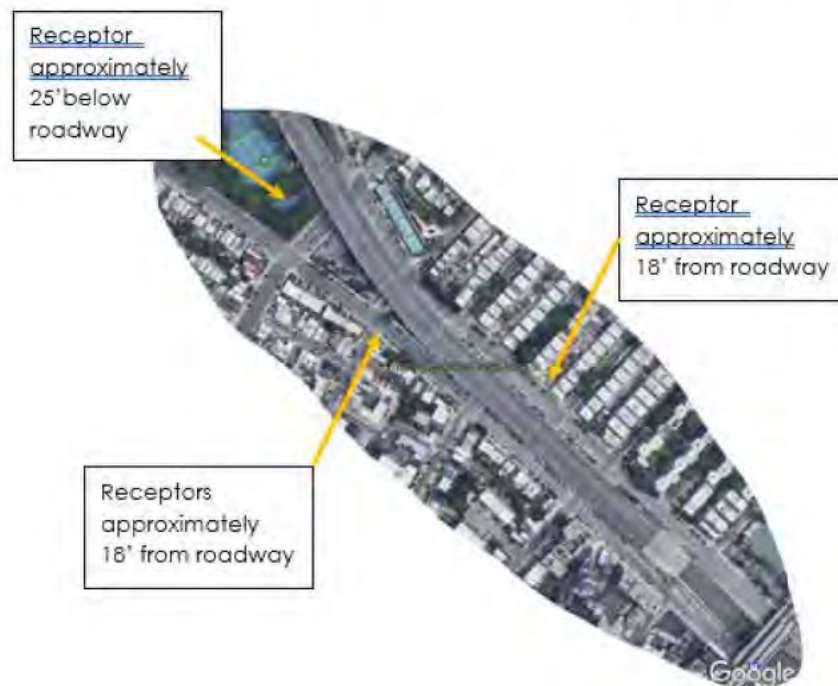
Site 2 - Cross Bronx @ Macombs, Scenario B

Nearest sensitive receptors are approximately 24' away from the edge of the roadway.



Site 3- RFK (Triborough) Queens Approach, Scenario E

Nearest sensitive receptor are approximately 18' from the edge of the roadway



Appendix C

ICG Concurrence E-mail

April 25, 2022

From: Lentlie, Patrick (DOT) <Patrick.Lentlie@dot.ny.gov>
Sent: Monday, April 25, 2022 12:55:41 PM
To: C. de Cerreno, Allison <allison.cdecerrero@mtahq.org>
Cc: Angel, Nichola <nangel@mtabt.org>; Flax, Leah <leah.flax@mtabt.org>; Wojnar, Michael <mwojnar@mtahq.org>; Nelson, Debra (DOT) <Debra.Nelson@dot.ny.gov>; gautam.mani@dot.gov <gautam.mani@dot.gov>; laurita.matthew@epa.gov <laurita.matthew@epa.gov>; Lentlie, Patrick (DOT) <Patrick.Lentlie@dot.ny.gov>; anna.price@dot.gov <anna.price@dot.gov>; Moser, Daniel (FTA) <daniel.moser@dot.gov>; Black, Lily <Black.Lily@epa.gov>; Burns, Donald (FTA) <Donald.Burns@dot.gov>; Anukwe, Uzoma (FTA) <uzoma.anukwe@dot.gov>; Smith, Terry (DOT) <Terry.Smith@dot.ny.gov>; Leslie, Catherine S. (DOT) <Catherine.Leslie@dot.ny.gov>; Nierenberg, Daniel R (DOT) <Daniel.Nierenberg@dot.ny.gov>; Savage, Laura E (DOT) <Laura.Savage@dot.ny.gov>; Neerackal, George (DOT) <George.Neerackal@dot.ny.gov>
Subject: RE: CBDTP Air Quality ICG Meeting: Presentation and proposed methodology

Allison,

The ICG concurs with the methodology used to identify the three locations for the CBDTP particulate matter hot-spot analysis. The ICG also concurs that if, after review of the analysis results and documentation, the three locations return values that do not violate the relevant NAAQS, then no further consultation with the ICG is required. This concurrence comes with the condition that the following comments are satisfactorily addressed:

- The USEPA and involved agencies reserve the right to request review of the modeling inputs/outputs and design value calculations during the review of the Air Quality technical report. Accordingly, the NYSDOT recommends the input files and relevant documentation be provided as soon as possible.
- Provide the source of age distribution data for the heavy-duty long-haul diesel trucks and confirm whether it is local or MOVES default data.
- For the RFK Bridge analysis location, confirm that the emissions from the nearby Astoria Generating Station are reasonably assumed to be reflected in the background PM concentrations
- Please specify the location(s) of the monitor(s) being used for the background concentrations used in the analysis.

If you have any questions, please let me know.

Thanks,

Patrick

Patrick Lentlie

Environmental Specialist 2, Environmental Science Bureau

New York State Department of Transportation

50 Wolf Rd, POD 4-1, Albany, NY 12232

(518) 457-0212 | Patrick.Lentlie@dot.ny.gov

www.dot.ny.gov

Appendix D

Analysis Results

(Electronic MOVES/AERMOD Files Available Upon Request)

Table 1 - Predicted 24-hour PM₁₀ Design Value Concentrations

Site	Alternative	Background Concentration (µg/m ³)	Modeled Concentration (µg/m ³)	Total Concentration* (µg/m ³)	NAAQS (µg/m ³)
I-95 west of the GWB	No Build	43	62	105	150
	Scenario C		64	107	
Cross Bronx at Macombs Road	No Build		65	108	
	Scenario B		66	109	
RFK Bridge Queens Approach	No Build		64	107	
	Scenario E		79	122	

* Total concentrations = modeled results + 24-hour PM₁₀ background
 µg/m³ = micrograms per cubic meter

Table 2 - Predicted 24-hour PM_{2.5} Design Value Concentrations

Site	Alternative	Background Concentration (µg/m ³)	Modeled Concentration (µg/m ³)	Total Concentration* (µg/m ³)	NAAQS (µg/m ³)
I-95 West of the GWB	No Build	22.0	7.5	29.5	35.0
	Scenario C		7.7	29.7	
Cross Bronx at Macombs Road	No Build		5.5	27.5	
	Scenario B		5.7	27.7	
RFK Bridge Queens Approach	No Build		3.2	25.2	
	Scenario E		5.7	27.7	

* Total concentrations = modeled results + 24-hour PM_{2.5} background
 µg/m³ = micrograms per cubic meter

Table 3 - Predicted Annual PM_{2.5} Design Value Concentrations

Site	Alternative	Background Concentration (µg/m ³)	Modeled Concentration (µg/m ³)	Total Concentration* (µg/m ³)	NAAQS (µg/m ³)
I-95 West of the GWB	No Build	8.7	2.4	11.1	12.0
	Scenario C		2.5	11.2	
Cross Bronx at Macombs Road	No Build		2.2	10.9	
	Scenario B		2.3	11.0	
RFK Bridge Queens Approach	No Build		1.1	9.8	
	Scenario E		1.9	10.6	

* Total concentrations = modeled results + Annual PM_{2.5} background
 µg/m³ = micrograms per cubic meter

Figure 1 – AERMOD Model Screenshot, I-95 west of GWB

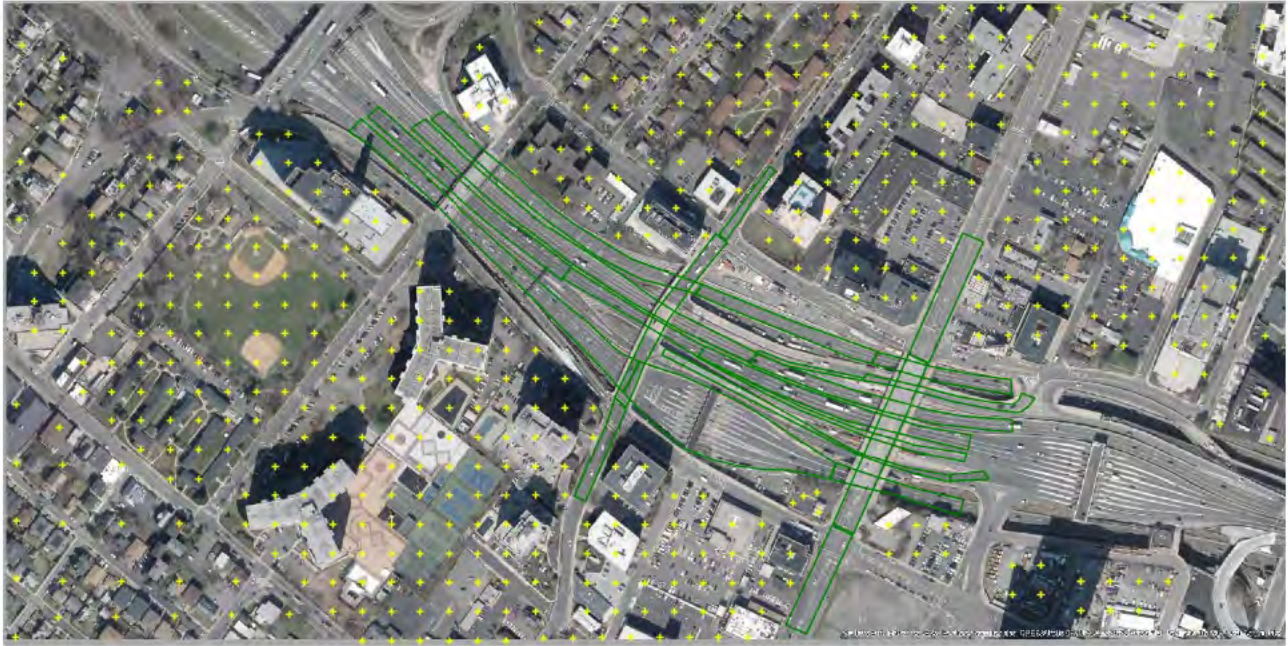


Figure 2 – 24-Hour PM₁₀ No Build Contours ($\mu\text{g}/\text{m}^3$), I-95 west of GWB



Figure 3 – 24-Hour PM₁₀ Scenario C Contours (µg/m³), I-95 west of GWB



Figure 4 – 24-Hour PM_{2.5} No Build Contours (µg/m³), I-95 west of GWB



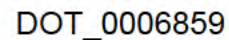


Figure 7 – Annual PM_{2.5} Scenario C Contours (µg/m³), I-95 west of GWB

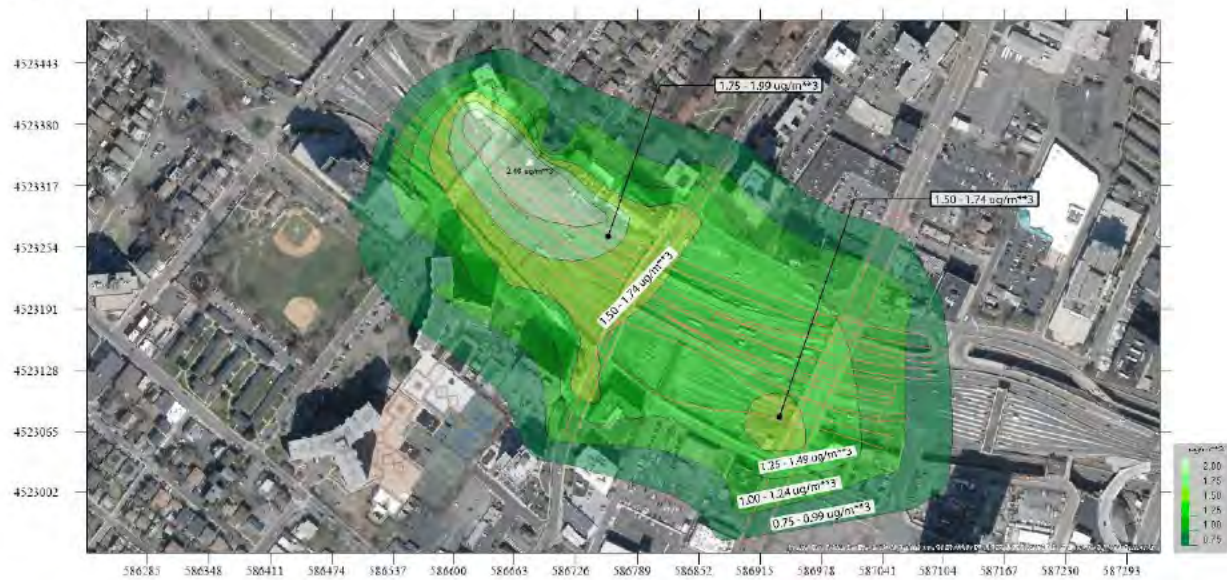


Figure 8 – AERMOD Model Screenshot, Cross Bronx at Macombs



Figure 9 – 24-Hour PM₁₀ No Build Contours (µg/m³), Cross Bronx at Macombs

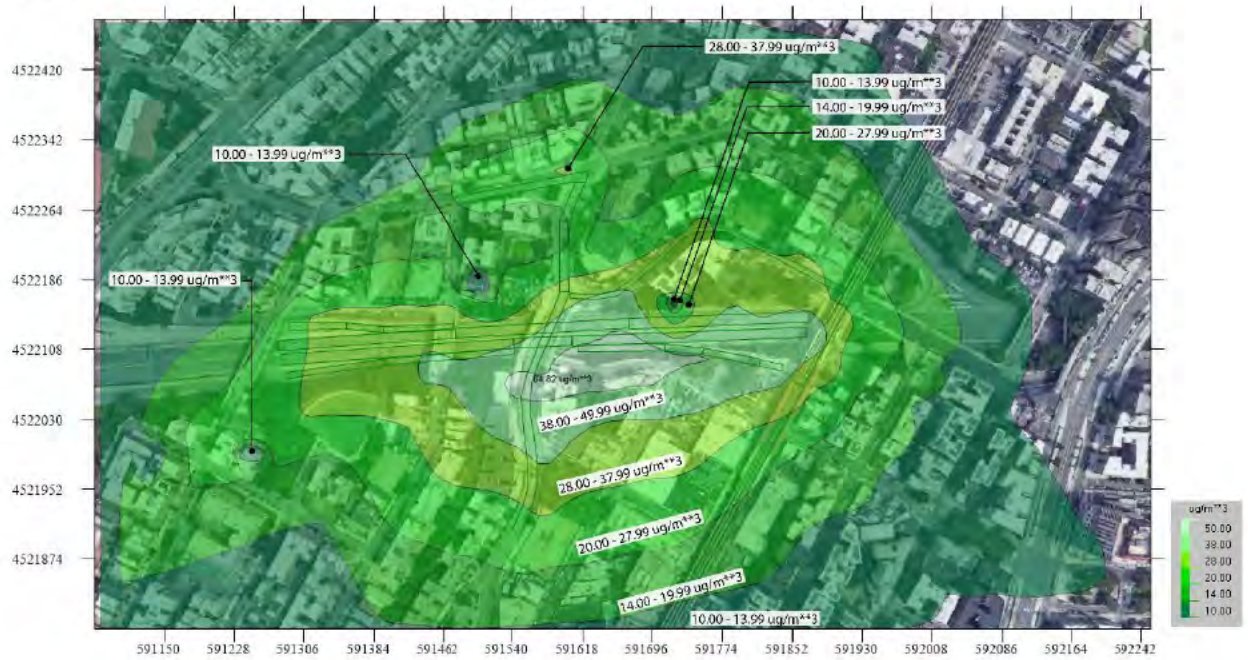


Figure 10 – 24-Hour PM₁₀ Scenario B Contours (µg/m³), Cross Bronx at Macombs

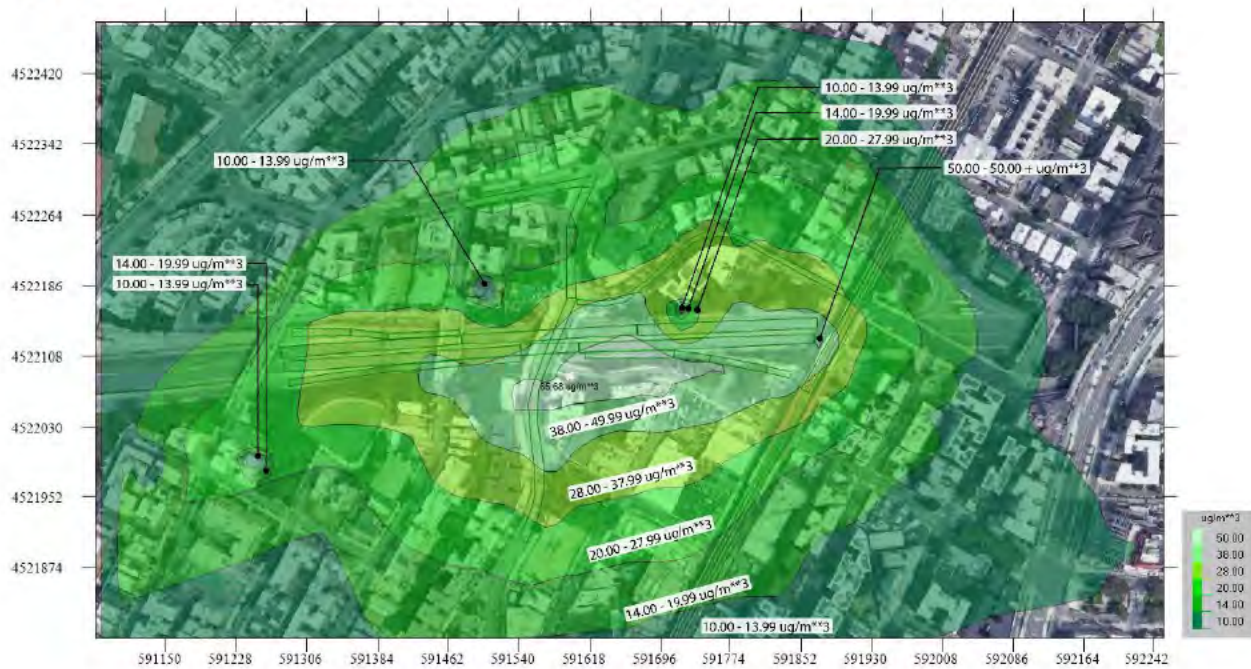


Figure 11 – 24-Hour PM_{2.5} No Build Contours (µg/m³), Cross Bronx at Macombs

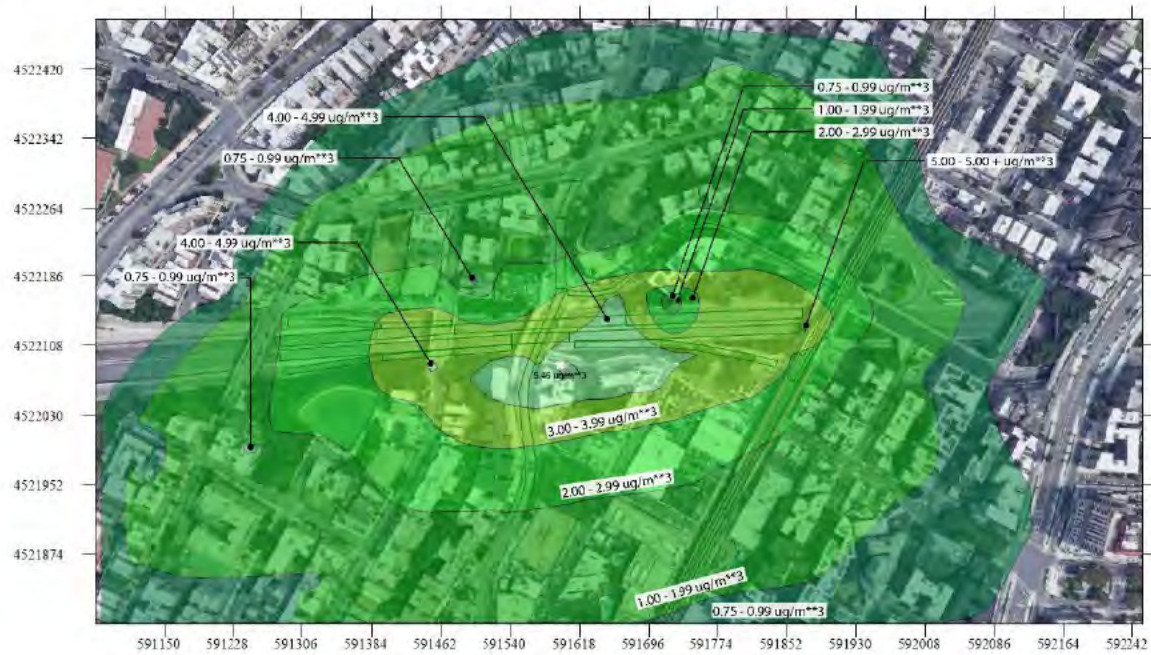


Figure 12 – 24-Hour PM_{2.5} Scenario B Contours (µg/m³), Cross Bronx at Macombs

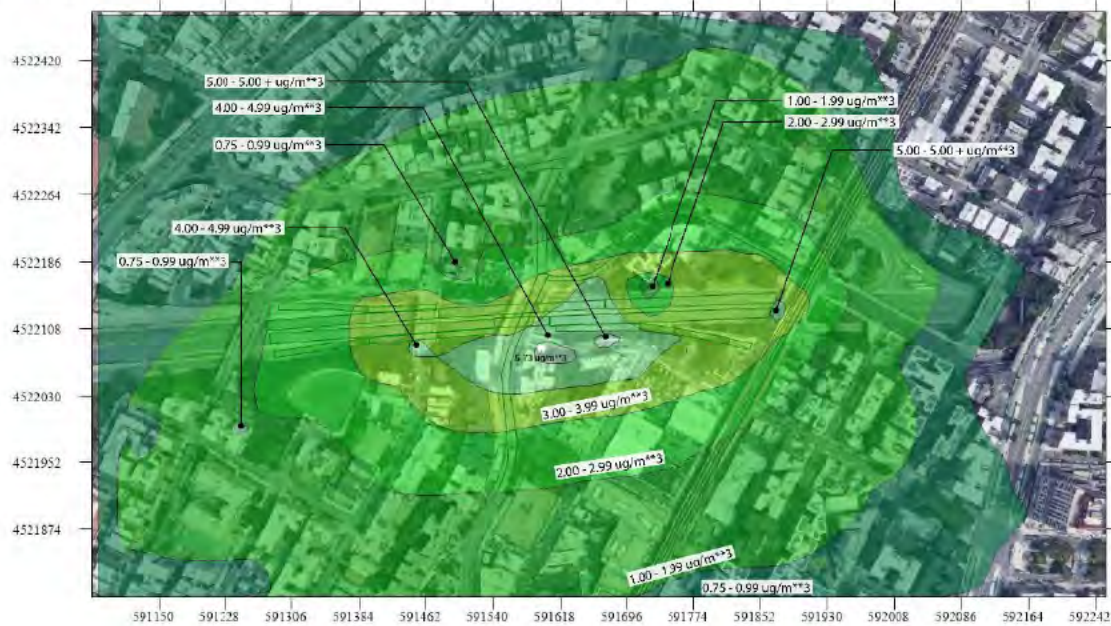


Figure 13 – Annual PM_{2.5} No Build Contours ($\mu\text{g}/\text{m}^3$), Cross Bronx at Macombs

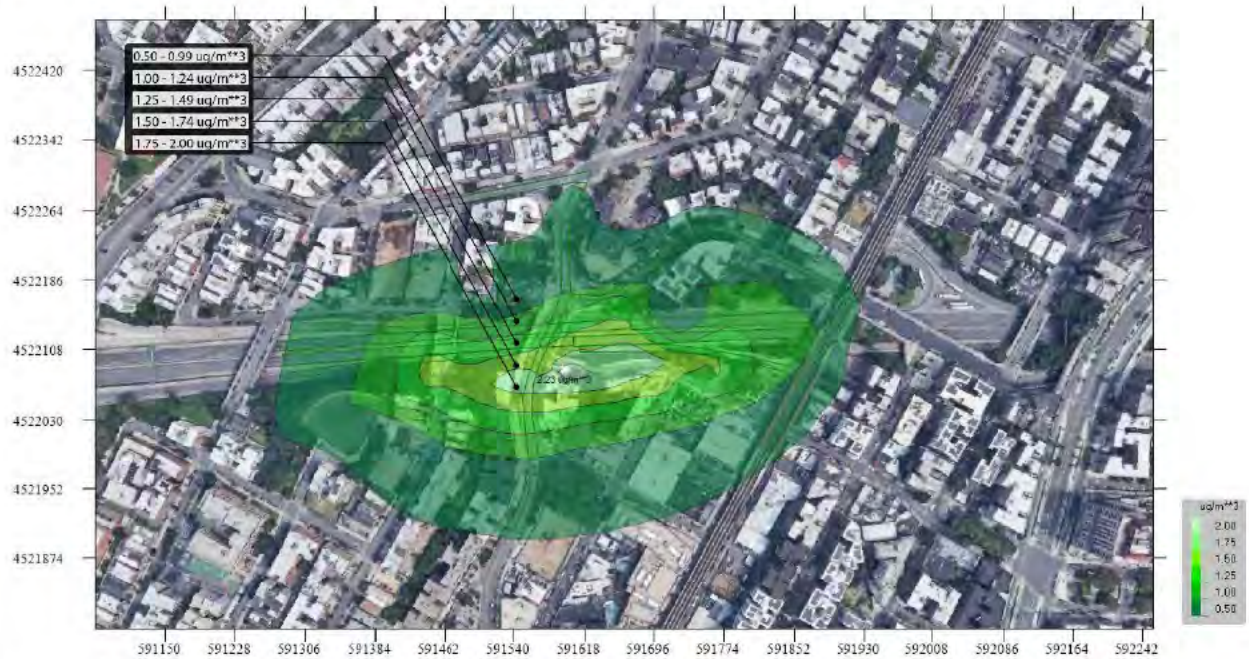


Figure 14 – Annual PM_{2.5} Scenario B Contours ($\mu\text{g}/\text{m}^3$), Cross Bronx at Macombs



Figure 15 – AERMOD Model Screenshot, RFK Queens Approach



Figure 16 – 24-Hour PM₁₀ No Build Contours (µg/m³), RFK Queens Approach

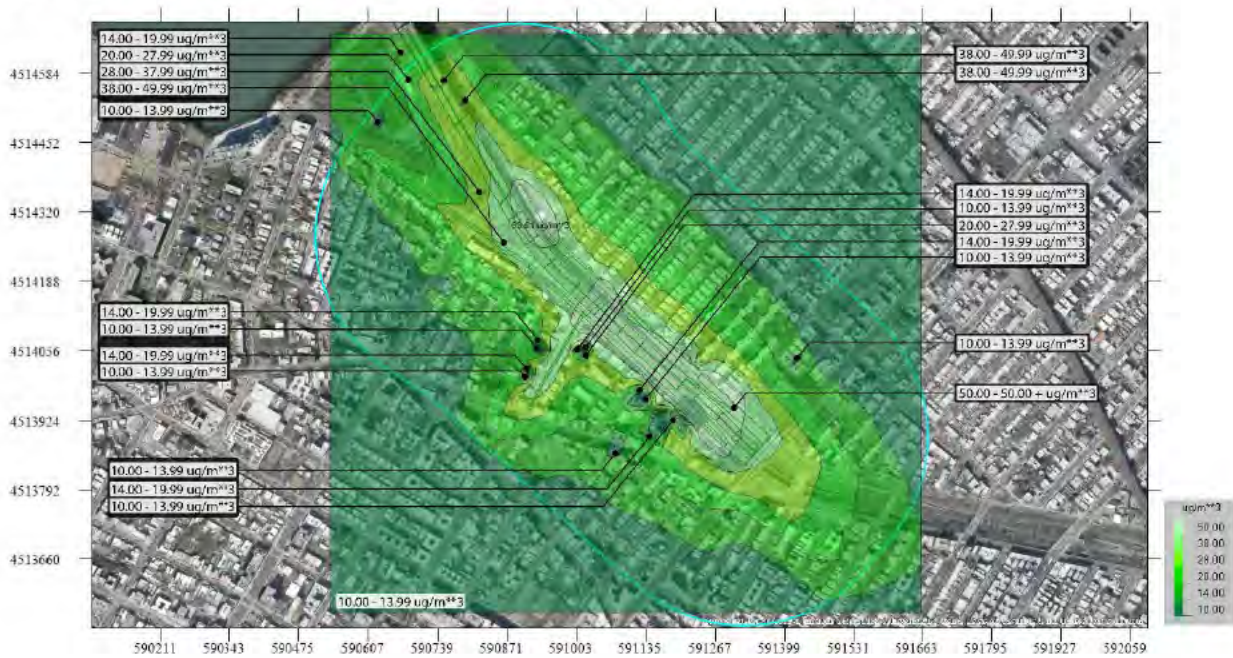


Figure 17 – 24-Hour PM₁₀ Scenario E Contours (µg/m³), RFK Queens Approach

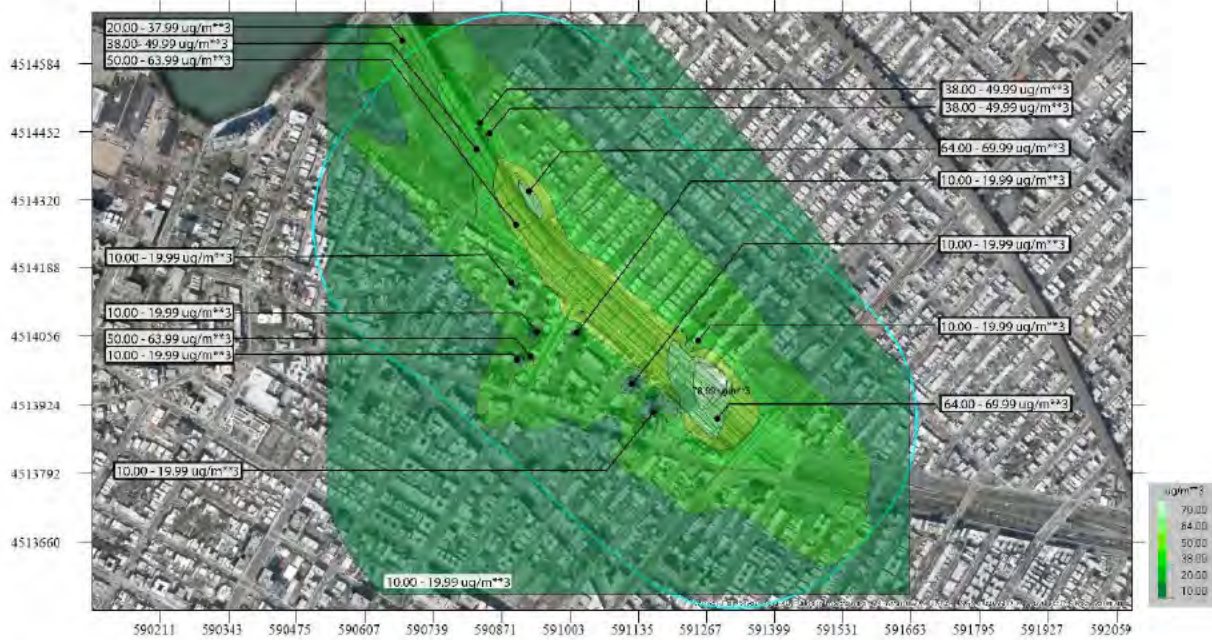
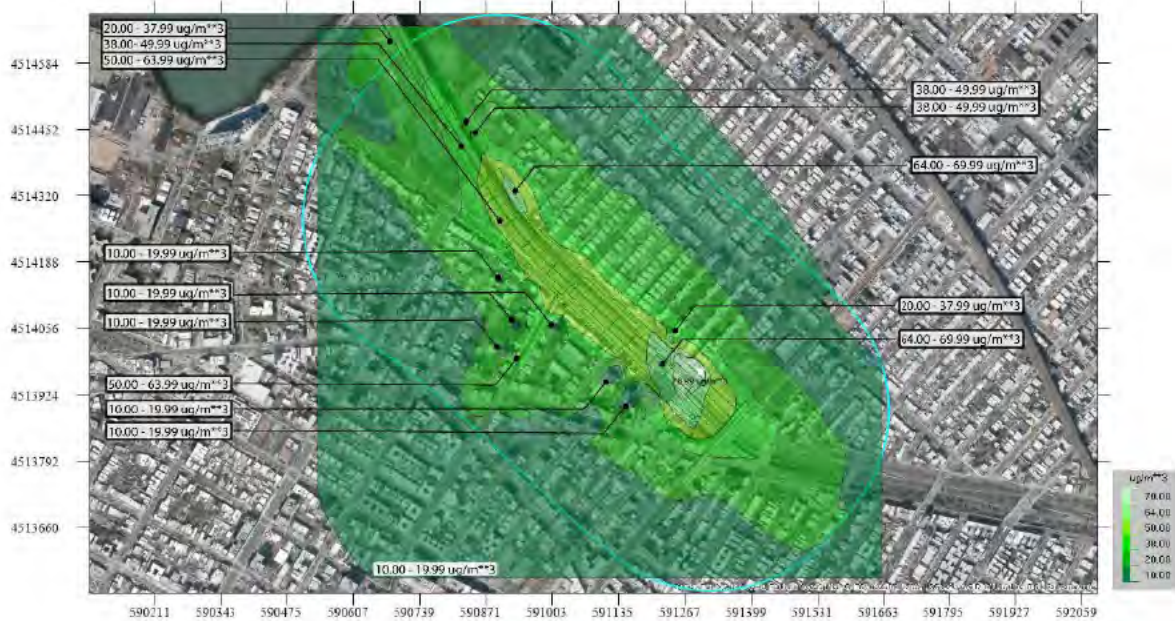


Figure 18 – 24-Hour PM_{2.5} No Build Contours (µg/m³), RFK Queens Approach



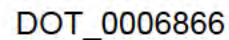
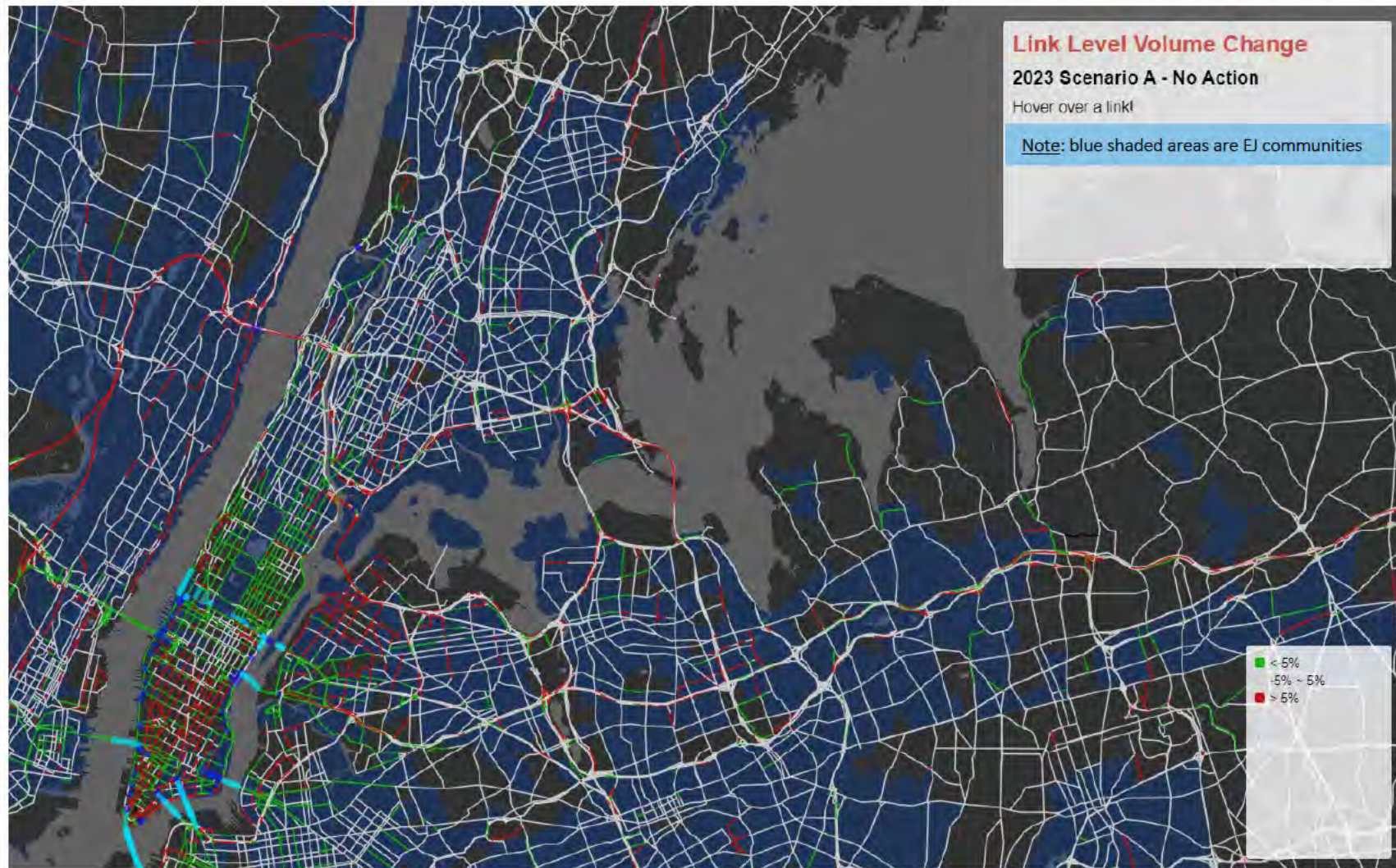


Figure 21 – Annual PM_{2.5} Scenario E Contours (µg/m³), RFK Queens Approach



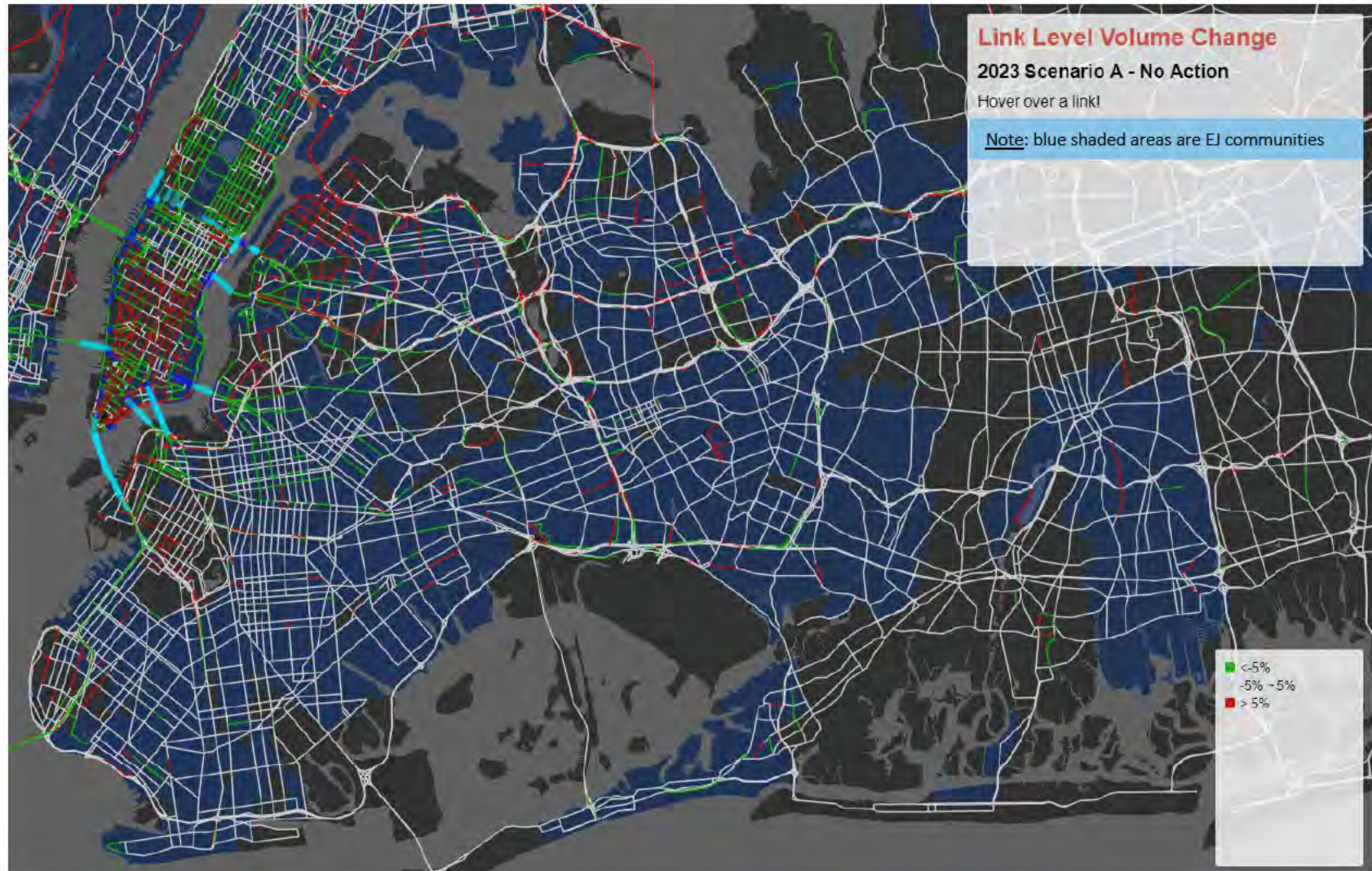
10D,
Changes in Annual Average Daily Traffic
(AADT)

Figure 10D-1. Changes in 2023 Annual Average Daily Traffic (AADT): Manhattan (New York County) and the Bronx (New York City Counties)



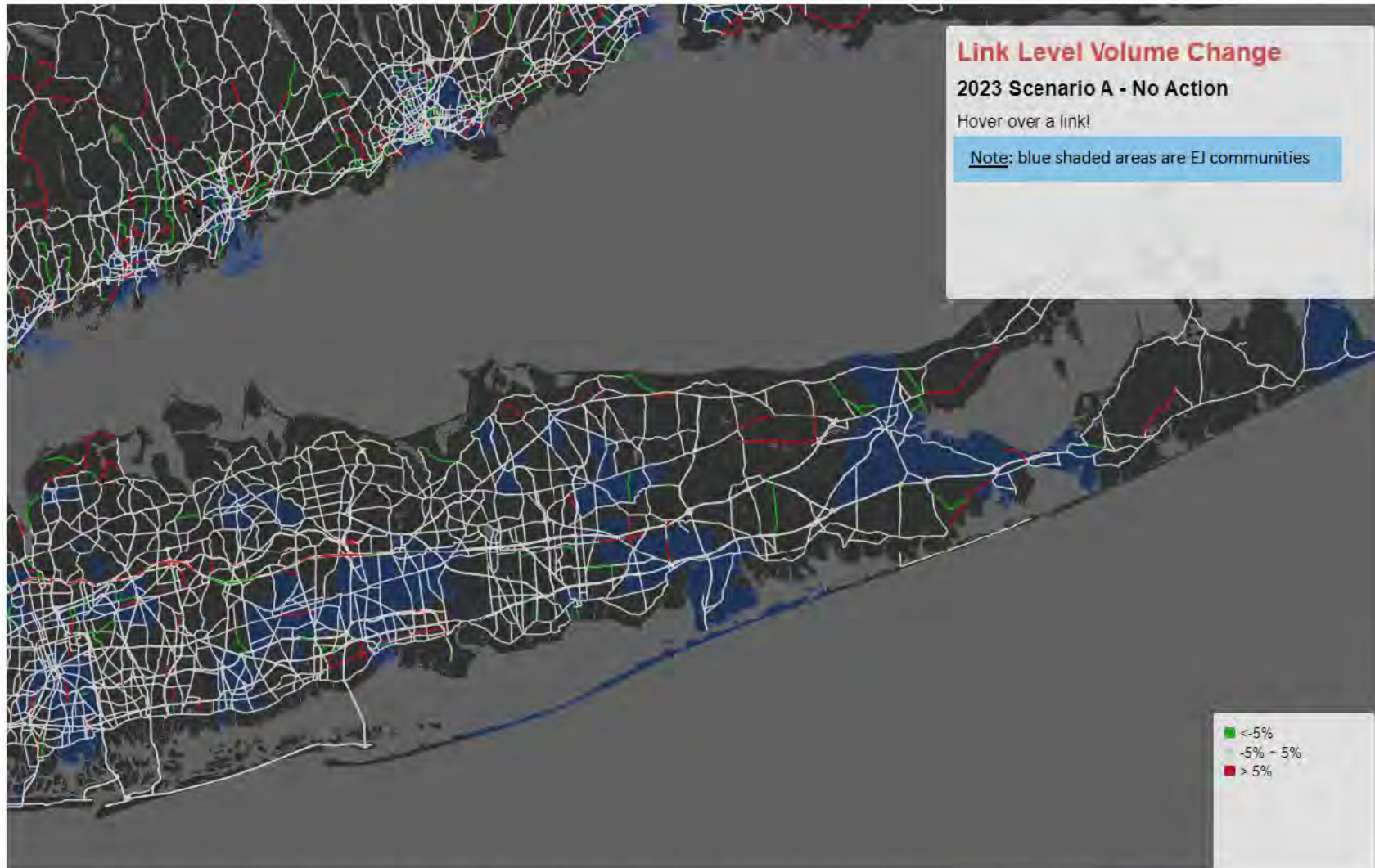
Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=yKCZZYk5P3Y&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=9.

Figure 10D-2. Changes in 2023 Annual Average Daily Traffic (AADT): Brooklyn (Kings County) and Queens (New York City Counties)



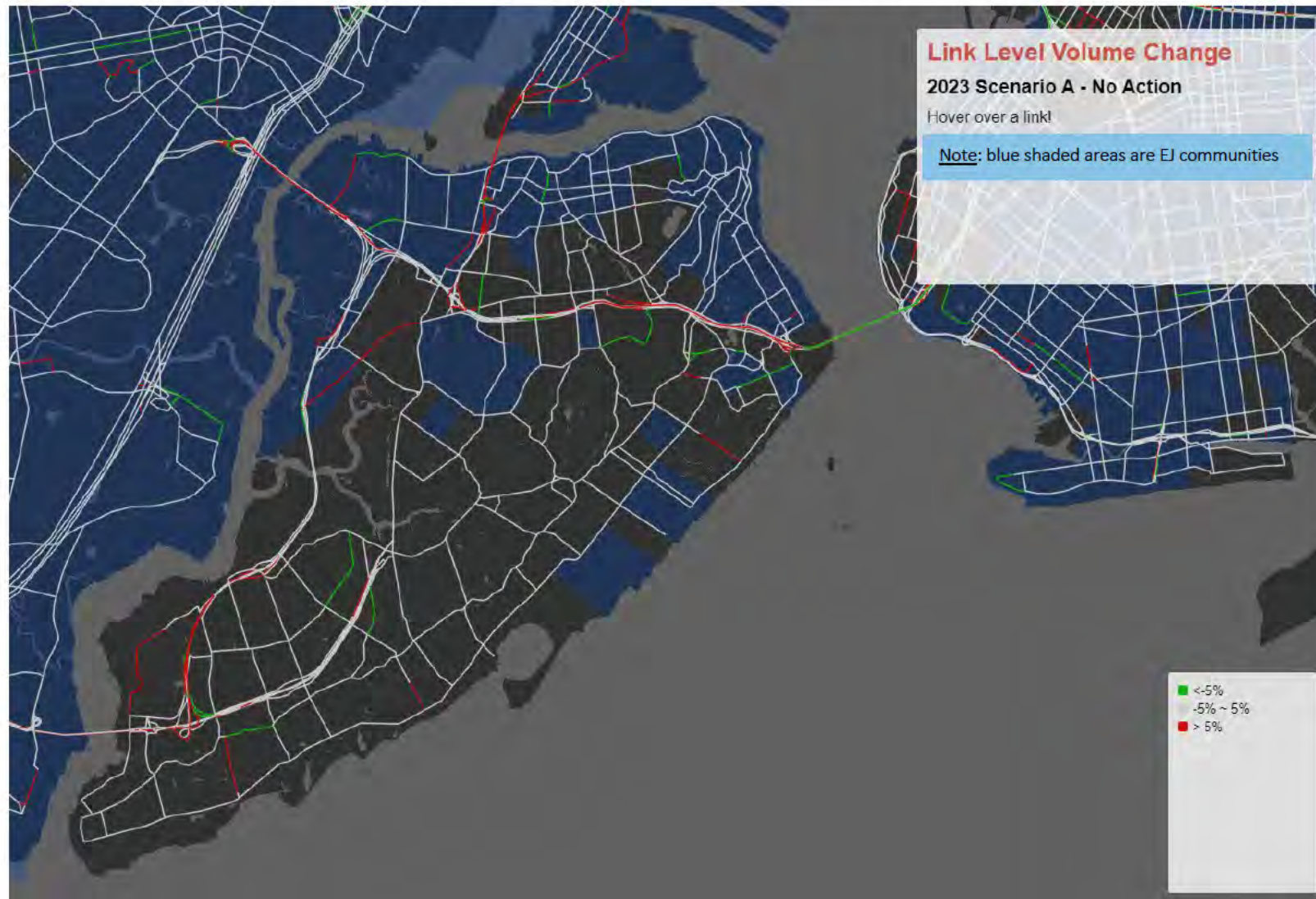
Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=RB5JY0IA7As&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=10.

Figure 10D-3. Changes in 2023 Annual Average Daily Traffic (AADT): Nassau and Suffolk Counties (Long Island Counties, New York)



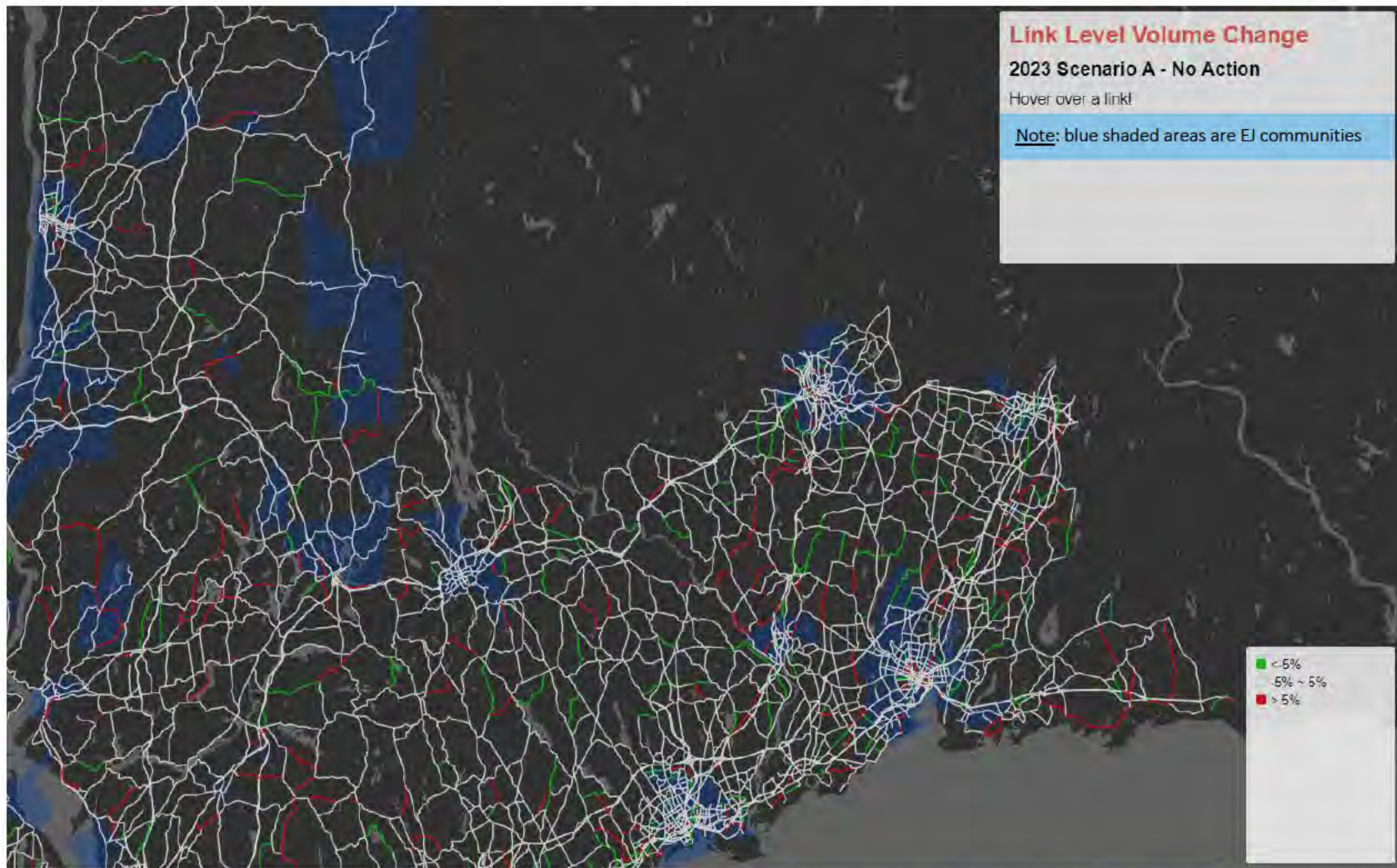
Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=S3tDxZ1gxZw&list=PLZHkn788ZQJPEY5zy-dr2gzkzMQFMgb_2&index=11.

Figure 10D-4. Changes in 2023 Annual Average Daily Traffic (AADT): Staten Island (Richmond County, New York)



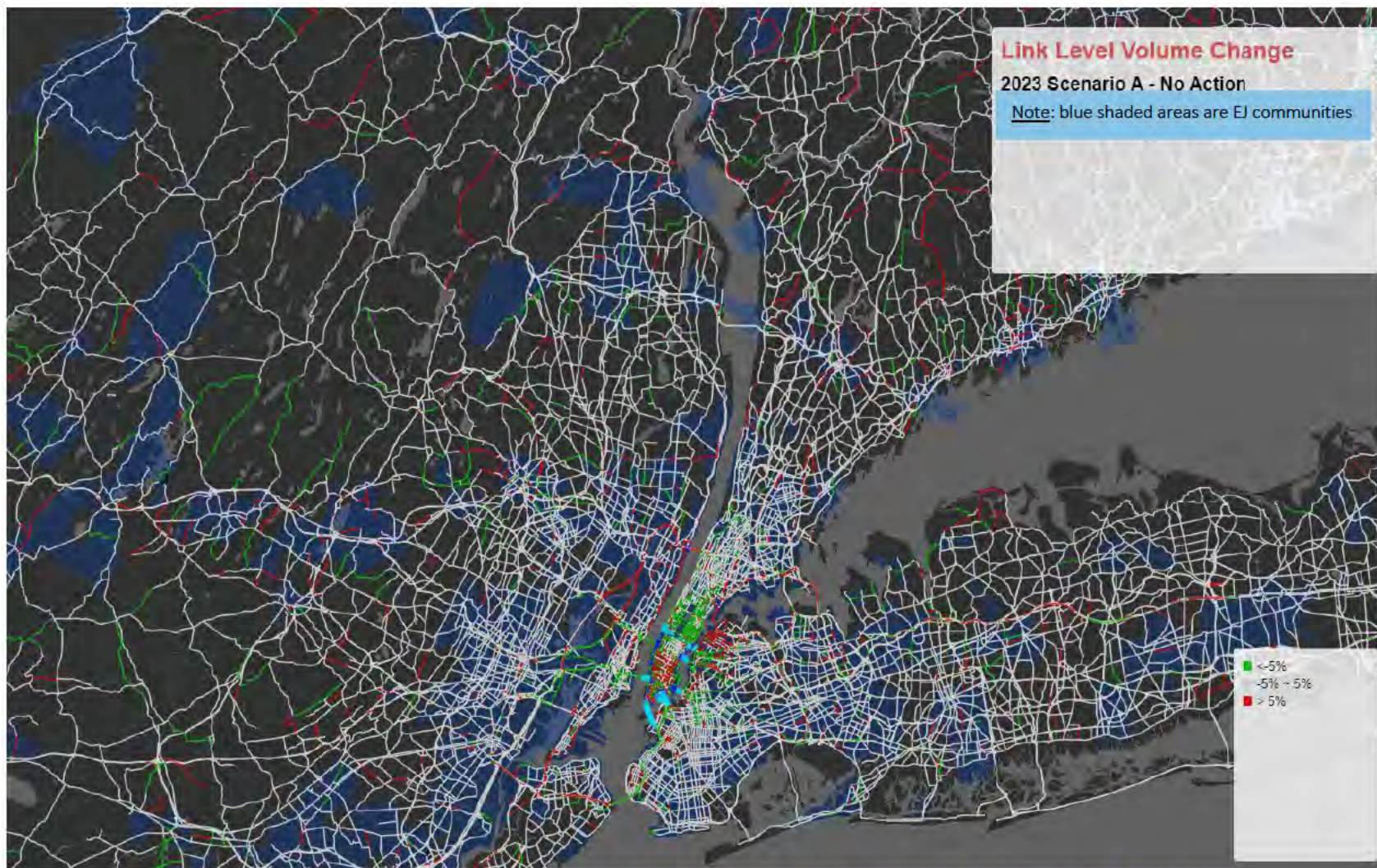
Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=Kzb9mV1OgCc&list=PLZHkn788ZQJPEY5zv-dr2gzkMQFMgb_2&index=12.

Figure 10D-5. Changes in 2023 Annual Average Daily Traffic (AADT): Westchester and Putnam Counties (New York Counties North of NYC)



Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=1XEnARhsYr0&list=PLZHkn788ZQJPEY5z-dr2gzkzMQFMgb_2&index=13.

Figure 10D-6. Changes in 2023 Annual Average Daily Traffic (AADT): Rockland, Bergen, and Hudson Counties (New Jersey Counties)



Note: An audio description of this figure is available at the following location: https://www.youtube.com/watch?v=TEcbVV-WJtY&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=14.

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 17, Environmental Justice

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Acronyms

ACS.....	American Community Survey
CBD	Central Business District
CEQ.....	Council on Environmental Quality
CP-29	Commissioner Policy 29
CTPP.....	Census Transportation Planning Package
EA.....	Environmental Assessment
EJ.....	Environmental Justice
FHWA.....	Federal Highway Administration
HHS	U.S. Department of Health and Human Services
NJDEP	New Jersey Department of Environmental Protection
NYSDEC.....	New York State Department of Environmental Conservation
NEPA	National Environmental Policy Act
SNAP	Supplemental Nutrition Assistance Program
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency

17A.1 INTRODUCTION

Appendix 17 to the Environmental Assessment (EA) for the Central Business District (CBD) Tolling Program (the Project) presents supplemental information related to the environmental justice analysis conducted for the Project and summarized in **Chapter 17, “Environmental Justice,”** of the EA. Specifically, **Appendix 17A** provides more detailed information on the methodology used for the analysis. **Appendix 17B** provides detailed maps illustrating the locations of minority and low-income populations in the study areas and **Appendix 17C** includes tables with related census information for all census tracts in the study area.

This part of Appendix 17 (Appendix 17A) provides an overview of the methodology used for the environmental justice analysis and the data sources used (**Sections 17A.2 and 17A.3**), followed by information on the methodology for identifying study areas for the analysis (**Section 17A.4**), the methodology for identifying minority populations (**Section 17A.5**), and the methodology for identifying low-income populations (**Section 17A.6**).

17A.2 OVERVIEW OF METHODOLOGY

The environmental justice analysis evaluates the potential for disproportionately high and adverse effects to environmental justice populations, consistent with FHWA’s 2011 *Guidance on Environmental Justice and the National Environmental Policy Act (NEPA)*, U.S. Department of Transportation (USDOT) Order 5610.2C, and FHWA Order 6640.23A. The following Federal regulatory and guidance documents were used for the environmental justice analysis:

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 1994)¹
- USDOT Order 5610.2C, Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (May 2021)²
- USDOT, Environmental Justice Strategy (November 2016)³
- FHWA Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (June 2012)⁴
- FHWA, Guidance on Environmental Justice and NEPA (December 2011)⁵
- FHWA, Environmental Justice Reference Guide (April 2015)⁶

¹ <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>.

² <https://www.transportation.gov/sites/dot.gov/files/Final-for-OST-C-210312-003-signed.pdf>.

³ <https://www.transportation.gov/transportation-policy/environmental-justice/environmental-justice-strategy>.

⁴ <https://www.fhwa.dot.gov/legisregs/directives/orders/664023a.cfm>.

⁵ https://www.environment.fhwa.dot.gov/env_topics/ej/guidance_ejustice-nepa.aspx.

⁶ https://www.fhwa.dot.gov/environment/environmental_justice/publications/reference_guide_2015/index.cfm.

- Federal Interagency Working Group on Environmental Justice & NEPA Committee, Promising Practices for Environmental Justice Methodologies in NEPA Reviews (March 2016)⁷

The following methodology was used to conduct the environmental justice analysis:

1. Review Project effects to identify appropriate study areas for analysis of environmental justice.
2. Identify existing minority and low-income (environmental justice) populations in the study areas.
3. Determine whether the Project would result in beneficial and/or adverse effects on the identified environmental justice populations. This includes consideration of measures to avoid, minimize, and/or mitigate any adverse effects of the Project as well as potential offsetting benefits to the affected environmental justice populations. Input from environmental justice populations regarding potential issues of concern and mitigation measures is an important part of this step.
4. If adverse effects would remain after implementation of measures to avoid, minimize, or otherwise mitigate adverse effects, and taking into account offsetting benefits, identify whether those effects would be predominately borne by environmental justice populations or are appreciably more severe or greater in magnitude on environmental justice populations than the adverse effect suffered by the non-minority or non-low-income population (these are considered disproportionately high and adverse effects).
5. If no disproportionately high and adverse effects are identified, the environmental justice evaluation is complete. If disproportionately high and adverse effects on environmental justice populations are anticipated, evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effects. As noted in FHWA's 2011 guidance, if there is a disproportionately high and adverse effect on an environmental justice population after taking benefits and mitigation into account, "FHWA will approve the proposed action only if it determines that no such practicable measures exist." In addition, FHWA will not approve the proposed action unless it determines "that there is a substantial need for a project, based on the overall public interest; and alternatives that would have less adverse effects on protected populations have either (a) adverse social, economic, environmental, or human health impacts that are more severe; or (b) would involve increased costs of an extraordinary magnitude."
6. In addition to assessing the potential for disproportionately high and adverse effects on environmental justice populations, the Project Sponsors must provide meaningful opportunities for environmental justice populations to provide input on the Project.

17A.3 DATA SOURCES

The environmental justice analysis is based on the conclusions of the other chapters of this EA, in combination with supplemental data on environmental conditions and information from the U.S. Census

⁷ The Project Sponsors reviewed this document in developing the analysis but used the guidance set forth in FHWA's 2011 Environmental Justice and NEPA. https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf.

Bureau. These conclusions were informed, in part, by concerns raised by the public during early public outreach for the Project in fall 2021.

Areas where residents are minority and/or low-income were identified using data from the U.S. Census Bureau 2015-2019 American Community Survey (ACS) 5-Year Estimates to identify census tracts that are low-income and/or minority. The 2015–2019 ACS 5-Year Estimates are the most current full set of demographic information, including racial and ethnic characteristics and household income and poverty status, available from the U.S. Census Bureau at the census tract level. The 2020 Census information now available does not include a full set of information.

Socioeconomic characteristics of the traveling public, including minority and low-income populations, were based on data from the U.S. Census Bureau's Census Transportation Planning Package (CTPP). The analysis of travel patterns in the regional study area focuses on low-income and minority people who travel to and from the Manhattan CBD to evaluate the effects of changing travel patterns on those people. The CTPP provides special tabulations, based on the U.S. Census Bureau ACS 5-Year Estimates, that are useful for transportation planning, including commuter flow data at varying geographic scales by mode of commute and household income. The CTPP data include information on commuter patterns for a range of income levels. The most recent CTPP is based on the 2012-2016 ACS 5-Year Estimates and has not been updated to reflect more recent ACS data.

Conclusions about the effects of the CBD Tolling Alternative on low-income and/or minority populations and potential measures to avoid, minimize, or mitigate those effects were informed by the early environmental justice public outreach for the Project in fall 2021. That outreach included public webinars to engage with environmental justice populations throughout the 28-county region, coordination with an Environmental Justice Technical Advisory Group, and meetings with an Environmental Justice Stakeholder Working Group.

17A.4 METHODOLOGY FOR IDENTIFYING STUDY AREAS

17A.4.1 Types of Study Areas

The environmental justice analysis evaluates two types of potential effects of the CBD Tolling Program, neighborhood effects and regional effects:

- **Local (Neighborhood) Effects:** These are effects on local communities. The potential neighborhood effects would be primarily related to diverted trips and changes in traffic patterns, and the potential resulting effects in terms of traffic congestion, air emissions, and noise.
- **Regional Effects:** These are effects on regional mobility. The analysis considers how implementation of the CBD Tolling Alternative would affect the regional population in terms of increased costs (tolls), changes in trip time, and changes in transit conditions.

To evaluate both types of effects of the CBD Tolling Program on environmental justice populations, two different study areas were used:

- **Local (Neighborhood) Study Area:** Based on a review of Project effects identified in other portions of the EA, this study area encompasses locations where localized effects (such as changes in traffic volumes, air emissions, or noise) would occur with the Project.
- **Regional Study Area:** The regional study area encompasses the 28-county study area that is the main catchment area for trips to and from the Manhattan CBD and the area where changes in travel patterns and mobility would occur.

17A.4.2 Review of Effects of CBD Tolling Alternative to Identify Environmental Justice Study Areas

Chapter 16, “Summary of Effects,” of the EA provides a summary of the CBD Tolling Alternative’s effects both locally and regionally. FHWA and the Project Sponsors reviewed those conclusions as well as concerns raised during public outreach for the Project to adjust the environmental analyses conducted for this EA and determine what Project effects have the potential to affect environmental justice populations. This informed selection of study areas for the environmental justice analysis and the topics to be considered in the analysis.

The information presented in **Chapters 4 through 15** of this EA describe the effects of implementation of the CBD Tolling Alternative on the general population and identify potential adverse effects and measures to avoid, minimize, or mitigate those effects.

In addition, during environmental justice public outreach conducted for the Project in fall 2021, members of the public raised a number of concerns related to the Project’s potential for effects on environmental justice populations, and FHWA and the Project Sponsors reviewed those concerns and included them in the analysis of environmental justice. **Table 16-1 in Chapter 16, “Summary of Effects,”** of the EA identifies the overall effects of the Project, compares the effects of the range of tolling scenarios analyzed in the EA, and identifies the potential for adverse effects on the overall population. FHWA and the Project Sponsors reviewed those conclusions as well as concerns raised during public outreach for the Project to determine what Project effects have the potential to affect environmental justice populations. This informed selection of study areas for the environmental justice analysis and the topics to be considered in the analysis.

17A.5 METHODOLOGY FOR IDENTIFYING MINORITY POPULATIONS

17A.5.1 Definitions

USDOT Order 5610.2C and FHWA Order 6640.23A include the following definitions related to minority populations:

- **Minority:** a person who is Black or African American (not Hispanic), American Indian and Alaskan Native, Asian American, Native Hawaiian or other Pacific Islander, and Hispanic or Latino.
- **Minority population:** Any readily identifiable groups of minority persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons, who will be similarly affected by a proposed FHWA program, policy, or activity.

This analysis also includes people who identified themselves as “some other race” or “two or more races” in the U.S. Census Bureau 2015–2019 ACS 5-Year Estimates.

17A.5.2 Minority Populations in Local (Neighborhood) Study Area

Census tracts were considered to be minority if either: (1) at least 50 percent of the census tract’s population identifies as minority; or (2) the percentage of population identifying as minority in the census block group exceeds the share of minority population in the county where that census tract is located.

17A.5.3 Minority Populations in Regional Study Area

The environmental justice analysis considers the Project’s potential for effects on minority-population commuters, travelers, or individuals in specific industries, businesses, or other groups that could be affected by increased cost associated with accessing the Manhattan CBD. To identify minority populations among these groups, the Project Sponsors used worker flow information from the CTPP.

Data is available in the CTPP regarding mode of travel by racial/ethnic group, and this data was used to identify overall travel patterns for minority people who work in the Manhattan CBD. However, the CTPP does not have data on minority commuters’ travel modes that also identifies the locations from which they travel. For this information, the Project Sponsors estimated the general locations from which minority commuters drive to the Manhattan CBD using a several-step process. For each census tract, information is available regarding travel modes for people who travel to work in Manhattan. The analysis assumed that the travel modes for all workers traveling to Manhattan from the tract also apply to the minority population in those tracts who are traveling to Manhattan for work. Using that assumption, the Project Sponsors estimated the number of minority people who commute to work in the Manhattan CBD by travel mode from each tract.

This methodology used data sets available in the CTPP in the first four steps before estimating in the final, fifth step:

1. Identify all census tracts in the 28-county region that are origins for minority people who work in the Manhattan CBD: the result is 4,311 census tracts.
2. For all tracts identified in step 1, identify all tracts that are origins for workers who drive to work in the Manhattan CBD: the result is 3,427 census tracts.

3. For all tracts identified in step 2, identify tracts that do not have any minority workers who drive to work, regardless of destination. The result is 25 tracts, which are then subtracted from those identified in step 2, leaving 3,402 census tracts with minority people who work in the Manhattan CBD and potentially could drive.
4. For the tracts identified in Step 3, identify tracts where all workers who commute to the Manhattan CBD drive. There are 31 such tracts, with 470 minority workers. Therefore those 470 minority workers drive to the Manhattan CBD. Similarly, identify tracts where all workers are minority or all drivers are minority. The result of this step is 8,764 minority auto commuters in 345 tracts.
5. For the remaining 3,060 census tracts, identify the percent of all workers who commute by car to the Manhattan CBD and identify the number of minority people who commute to the Manhattan CBD from the tract. Apply the auto share percentage to the minority workers, assuming that the same percentage of minority workers drives as the percentage of overall workers.

Table 17A-1 provides a summary of the results using this approach.

Table 17A-1. Estimating Minority Workers Who Drive to the Manhattan CBD

STEP	SOURCE	RESULT
1. Census tracts that are the origin for minority people who work in the Manhattan CBD	CTPP data on worker flows between census tracts, by race	Total minority workers in the Manhattan CBD Identification of all census tracts as origins
2. Census tracts that are origins for all workers who drive to the Manhattan CBD	CTPP data on worker flows between census tracts, by mode	Identification of specific census tracts from which people drive to work to the Manhattan CBD
3. Census tracts where no minority workers drive to work	CTPP data on worker origins and mode to work, by race (no destinations)	Identification of specific census tracts from which no minority workers can drive to work in the Manhattan CBD
4. Census tracts where all workers commute to the Manhattan CBD by driving, all workers are minority, or all drivers are minority.	CTPP data on worker flows, by race and/or by mode	Total minority commuters to the Manhattan CBD who drive from specific identified census tracts
5. For remaining census tracts, apply overall worker mode share to the Manhattan CBD to minority people who work in the Manhattan CBD.	CTPP data on worker flows by mode applied to CTPP data on worker flows by race	Estimated number of minority workers who drive to the Manhattan CBD from remaining tracts
RESULTING TOTAL:		Estimated total of minority workers who drive to the Manhattan CBD and from which specific census tracts

17A.6 METHODOLOGY FOR IDENTIFYING LOW-INCOME POPULATIONS

17A.6.1 Definitions

USDOT Order 5610.2C and FHWA Order 6640.23A include the following definitions related to minority populations:

- **Low-Income:** A person whose household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines.
- **Low-Income Population:** Any readily identifiable groups of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed FHWA program, policy, or activity.

The U.S. Census Bureau identifies households and household income. According to the U.S. Census Bureau, a household “includes all the persons who occupy a housing unit as their usual place of residence.”⁸

The analysis for this Project used information on the number of households living in poverty from the U.S. Census Bureau 2015–2019 ACS 5-Year Estimates. The HHS poverty guidelines are based on annual statistical poverty thresholds from the U.S. Census Bureau.⁹ The U.S. Census Bureau poverty thresholds are used to identify the population living in poverty for statistical purposes, while the HHS poverty guidelines are used to determine eligibility for Federal programs. Poverty thresholds vary by family size and composition, while poverty guidelines vary by household size and geographic location and both are updated annually.¹⁰

The environmental justice analysis used information from the U.S. Census Bureau’s 2015-2019 ACS 5-Year Estimates to identify low-income census tracts in the study area. Information on the population with household incomes below the poverty thresholds as defined by the U.S. Census Bureau is available at a local (census tract) level, whereas information on the HHS poverty guideline is not. However, as the HHS poverty guidelines are based on the Census Bureau threshold, the latter is commonly used as a proxy for the former.

Based on a review of potential methodologies and consideration of a number of critical factors, the Project Sponsors in consultation with FHWA identified income thresholds to be used in identifying low-income populations that are appropriate for identifying low-income populations in the Project study area and reflect local conditions and cost of living in the study area.

⁸ <https://www.census.gov/quickfacts/fact/note/US/HSD410219>.

⁹ <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty>.

¹⁰ This approach is recommended in the Federal Interagency Working Group on Environmental Justice & NEPA Committee’s *Promising Practices for Environmental Justice Methodologies in NEPA Reviews* (2016).

17A.6.2 Low-Income Populations in Local (Neighborhood) Study Area

17A.6.2.1 Approach

The Project Sponsors identified census tracts with low-income populations using a low-income threshold of twice the Federal poverty threshold. (More specifically, the Project Sponsors used data from the U.S. Census on the number of individuals in each census tract with household incomes up to 1.99 times the Federal poverty threshold. For simplicity, this analysis refers to that information as twice the Federal poverty threshold.) This income level was used to identify low-income census tracts as follows:

1. The percentage of individuals with household incomes up to twice the Federal poverty threshold in each census tract was identified and compared to that percentage for a larger reference area. Census tracts with a higher percentage of population with household incomes at or below twice the Federal poverty threshold were considered low-income.
2. The reference area for comparison was the regional 28-county study area.

The rationale for those two steps is described below.

17A.6.2.2 Rationale for Low-Income Threshold for Census Tracts

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), directs Federal agencies to identify and address, as appropriate, disproportionately high and adverse effects of Federal actions on minority and low-income populations. That document does not define “low-income.” While the USDOT Order 5610.2C and FHWA Order 6640.23A define low-income populations as people living below the HHS poverty guideline, the 2011 FHWA guidance document notes that Project Sponsors may adopt a more inclusive threshold for low-income as long as it is inclusive of all persons at or below the Federal poverty guidelines.¹¹ The Project Sponsors used a threshold for identifying populations living in poverty that is specific to the Project context, recognizing that the level of income that constitutes poverty is higher in the New York metropolitan region than it is nationwide, given the higher cost of many items, and particularly housing, in the New York City area.

In identifying the low-income threshold of twice the Federal poverty threshold, the Project Sponsors considered the following factors, to ensure that the approach reflects the local context for the Project and employs an appropriate methodological approach:

- The threshold used for identifying low-income census tracts should relate to the Federal poverty threshold, rather than to a specific household income level. The Federal poverty threshold incorporates consideration of household size and composition, which is important in identifying a household’s economic strength.

¹¹ The U.S. Census Bureau has established poverty thresholds to identify the population living in poverty, which are updated each year. These can be used to identify the population living in poverty in a specific location, such as a census tract. The HHS poverty guidelines are a simplified version of those Federal poverty thresholds that are used for administrative purposes—for instance, determining financial eligibility for certain Federal programs. <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty>.

- The threshold used for identifying low-income census tracts should be consistent with relevant guidance developed by Federal, state, and local agencies.
- The threshold used for identifying low-income census tracts should be based on data that is readily available at a census tract level from the U.S. Census, without adjustments and estimations that might make the results difficult to explain or less clearly reliable.

These considerations are described below.

Relationship to Federal Poverty Threshold

An important consideration in selecting the threshold for identifying low-income census tracts is that it should relate to the Federal poverty threshold, rather than to a specific household income level. The Federal poverty threshold incorporates consideration of household size and composition, which is important in identifying a household's economic strength.

The Federal poverty threshold varies by family size, number of children, and number of people over age 65. As shown **Table 17A-2**, for 2019, the poverty threshold ranged from a household income of \$13,011 for a one-person household to \$52,875 for a family of nine people or more.¹² The values shown in this table from the U.S. Census Bureau are weighted averages for the actual more detailed thresholds, which account for the age of the head of household and number of children in the family.

Table 17A-2. 2019 Federal Poverty Threshold by Family Size

SIZE OF FAMILY UNIT	WEIGHTED AVERAGE THRESHOLD
One person	\$13,011
Two people	\$16,521
Three people	\$20,335
Four people	\$26,172
Five people	\$31,021
Six people	\$35,129
Seven people	\$40,016
Eight people	\$44,461
Nine people or more	\$52,875

Source: U.S. Census Bureau.

Note: The poverty thresholds for each family size include specific amounts that vary depending on the age of the primary householder (under age 65 or over age 65) and the number of related children under 18 years old in the family.

Based on the information in **Table 17A-2**, identifying an income threshold that is not tied to household size and composition would not adequately represent the economic strength of households in a specific census tract.

¹² Please note that the Project Sponsors used 2019 census data in the EA, since 2019 is the most recent year for which full sets of census data are available.

Guidance from Federal, State, and Local Agencies Related to Populations in Poverty

The Project Sponsors reviewed a range of different Federal, state, and local programs, guidance, and policies related to identifying low-income populations and populations in poverty. Methodologies and approaches vary, depending on the purpose of the specific program or policy. A number of key programs and guidance documents support the use of twice the Federal poverty threshold in identifying low-income populations, including those described below.

U.S. Environmental Protection Agency EJSCREEN

The U.S. Environmental Protection Agency (USEPA) has developed an environmental justice mapping and screening tool, EJSCREEN, that uses demographic information and environmental indicators to identify geographic areas of concern in environmental justice analyses for projects subject to approval by EPA (<https://www.epa.gov/ejscreen>). To identify low-income populations, the EPA screening tool identifies the percent of a census block group's population with household income less than or equal to twice the Federal poverty threshold.

The technical documentation for EPA's environmental justice screening tool explains the rationale for using twice the Federal poverty level (see Appendix B of the EJSCREEN Technical Documentation).¹³ The explanation provided includes the following:

- “The effects of income on baseline health and probably on other aspects of susceptibility are not limited to those below the poverty thresholds—those from 1x to 2x poverty also have worse health overall than those with higher incomes . . . , and asthma rates, for example, begin to increase as income falls below twice the poverty threshold.”
- “Many studies in various fields use 2x times poverty, and many others use 1x poverty; the same is true for prior EPA screening tools. There is precedent for both. However, a rationale often mentioned is that today's poverty thresholds are too low to adequately capture the populations adversely affected by low income levels, especially in high-cost areas. Some analysts have concluded that the amount of income actually required for basic living costs without government support is far higher than the current Federal poverty thresholds.”

Guidance Related to Justice40 Initiative

On January 27, 2021, President Biden signed Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*, which established an environmental justice initiative known as “Justice40.” The Executive Order established a goal that for the Federal government's investments in certain areas, 40 percent of the overall benefits of these investments should benefit disadvantaged communities.

As part of the government-wide Justice40 initiative, the Council on Environmental Quality (CEQ), in partnership with the U.S. Digital Service, developed a geospatial Climate and Economic Justice Screening Tool. That screening tool includes interactive maps to assist agencies in defining and identifying disadvantaged communities at the census tract level. A preliminary version of the screening tool is currently

¹³ https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf.

available for public comment (<https://screeningtool.geoplatform.gov/en/about>). One of the factors the Climate and Economic Justice Screening Tool uses for identifying disadvantaged communities is related to low-income status, where the low-income population is defined as the percent of a census tract's population where household income is at or below twice the Federal poverty level.¹⁴

New York State Environmental Justice Policy

In 2003, the New York State Department of Environmental Conservation (NYSDEC) issued a policy statement related to incorporating environmental justice concerns in the agency's permitting processes. That policy statement, *Commissioner Policy 29 (CP-29), Environmental Justice and Permitting*, is still in effect today. CP-29 identifies a low-income population to be a population with annual income less than the Federal poverty threshold.

New Jersey Environmental Justice Screen

In 2020, New Jersey Governor Phil Murphy signed a statewide Environmental Justice Law, which requires the New Jersey Department of Environmental Protection (NJDEP) to evaluate the environmental and public health impacts of certain facilities on overburdened communities when reviewing certain permit applications. That law defines an overburdened community based on the percentage of low-income households, the percentage of minority residents, and/or the percentage of households with limited English proficiency. Low-income households are defined as those at or below twice the Federal poverty threshold as determined by the U.S. Census Bureau.¹⁵

New York City Local Poverty Threshold

The City of New York produces and publishes each year its own poverty measure, which considers the higher cost of living in New York City relative to many other areas of the U.S. This information is available at <https://www1.nyc.gov/site/opportunity/poverty-in-nyc/poverty-measure.page>.

The New York City poverty measure is based on national data on family spending for necessities (food, clothing, shelter, and utilities), but is adjusted for family size and the higher cost of housing in New York City. It also reflects many factors that are in place to address local poverty, including nutrition assistance (the Federal Supplemental Nutrition Assistance Program [SNAP], free school meals, and the Special Supplemental Nutrition Program for Women, Infants, and Children), housing assistance (including public, subsidized, and rent-regulated apartments), and home heating assistance. It also reflects nondiscretionary spending, such as child-care and transit costs and out-of-pocket medical expenses.

Like the Federal threshold, the New York City poverty threshold varies depending on the size of the family and the number of children in the family. The annual report published in 2021, which presents poverty data for 2019 (the most recent report for which detailed appendices are available) presents a comparison of the Federal poverty threshold and New York City poverty threshold. That information is presented in **Table 17A-3**.

¹⁴ <https://screeningtool.geoplatform.gov/en/methodology>.

¹⁵ <https://www.nj.gov/dep/ej/policy.html>.

Table 17A-3. Comparison of New York City and Federal Poverty Thresholds for 2019

FAMILY SIZE	2019 NEW YORK CITY POVERTY THRESHOLD	2019 FEDERAL POVERTY THRESHOLD	RATIO OF NEW YORK CITY TO FEDERAL THRESHOLD
One Adult, No Children	\$16,806	\$13,300	1.26
Two Adults, No Children	\$23,697	\$17,120	1.38
One Adult, One Child	\$25,360	\$17,622	1.44
One Adult, Two Children	\$30,108	\$20,598	1.46
One Adult, Three Children	\$34,552	\$26,107	1.33
Two Adults, One Child	\$31,917	\$20,578	1.55
Two Adults, Two Children	\$36,262	\$25,926	1.40
Two Adults, Three Children	\$40,394	\$30,510	1.32

Sources: U.S. Census Bureau and Office of the Mayor, New York City Government Poverty Measures 2019, Appendix B, Defining a Poverty Threshold for New York City, Table B.3. <https://www1.nyc.gov/site/opportunity/poverty-in-nyc/poverty-measure.page>.

As defined in the report, the poverty threshold represents “the minimal socially acceptable measure of resources necessary for a family of a particular size.” New York City also defines a “near-poverty” threshold for families that have incomes within 150 percent of the New York City poverty threshold. **Table 17A-4** presents the near-poverty thresholds as defined by New York City and their resulting ratio to the Federal poverty threshold for 2019. Based on the information from **Table 17A-2**, this near-poverty threshold aligns with the use of twice the Federal poverty threshold for identifying low-income households.

Table 17A-4. Comparison of New York City “Near Poverty” Threshold and Federal Poverty Threshold for 2019

FAMILY SIZE	2019 NEW YORK CITY NEAR POVERTY THRESHOLD	2019 FEDERAL POVERTY THRESHOLD	RATIO OF NEW YORK CITY TO FEDERAL THRESHOLD
One Adult, No Children	\$25,209	\$13,300	1.90
Two Adults, No Children	\$35,545	\$17,120	2.08
One Adult, One Child	\$38,041	\$17,622	2.16
One Adult, Two Children	\$45,161	\$20,598	2.19
One Adult, Three Children	\$51,829	\$26,107	1.99
Two Adults, One Child	\$47,876	\$20,578	2.33
Two Adults, Two Children	\$54,393	\$25,926	2.10
Two Adults, Three Children	\$60,591	\$30,510	1.99

Source: U.S. Census Bureau and Office of the Mayor, New York City Government Poverty Measures 2018, Appendix B, Defining a Poverty Threshold for New York City, Table B.7. <https://www1.nyc.gov/site/opportunity/poverty-in-nyc/poverty-measure.page>.

New York City Environmental Justice Initiative

In addition to the local poverty measure that the City of New York developed and updates annually, in 2017 then-Mayor Bill de Blasio signed into law Local Law 60, which required that a citywide study of environmental justice be conducted and summarized in a report, the *Environmental Justice for All Report*. The law also required the creation of an online environmental justice portal with a mapping tool for environmental justice data.

In December 2021, the City published the proposed scope of work for the *Environmental Justice for All Report* for public review and comment (<https://www1.nyc.gov/assets/sustainability/downloads/pdf/EJ-Report-Scope.pdf>). As outlined in that scope, environmental justice areas will be identified in that report based on the presence of low-income or minority populations. Low-income populations are defined as populations with annual incomes less than the poverty threshold established by the U.S. Census Bureau.

New York City Fair Fares Program

Also relevant for the analysis as a policy related to ability to pay for costs of travel, is New York City's "Fair Fares" program, a program developed by the City of New York to provide low-income New York City residents with half-price transit fares. This program provides a 50 percent discount for subway and local bus fares as well as the cost of Access-A-Ride paratransit trips. The Fair Fares program is available to eligible New York City residents with incomes at or below the Federal poverty level.

Summary

A number of different programs for identifying economically disadvantaged populations for purposes of evaluating and addressing environmental justice and transportation equity support identifying low-income populations as people in households with incomes up to twice the Federal poverty threshold. At the Federal level, these include EPA's EJSCREEN and the preliminary guidance and screening tools developed for the Justice40 initiative. At the state level, they include New York State environmental justice thresholds for permitting and New Jersey's Environmental Justice Law. In New York City, a locally developed poverty measure reflecting the specific cost of living factors in the city is also consistent with a threshold at twice the Federal poverty level.

Data Readily Available from the U.S. Census

Using twice the Federal poverty threshold as an indicator of low-income population is consistent with a goal of using a threshold that is based on data that is readily available at a census tract level from the U.S. Census, without adjustments and estimations that might make the results difficult to explain or less clearly reliable. The U.S. Census includes information on the number of individuals with household incomes at or below the Federal poverty threshold at the census tract level. It also includes information about the number of individuals with household incomes of up to twice (1.99 times) the Federal poverty threshold, as well as other multiples of the poverty threshold. This information reflects the family size and composition of each individual as well as their household income in identifying their income status relative to the poverty threshold.

17A.6.2.3 Rationale for Reference Area for Census Tracts

The methodology for identifying low-income census tracts involves comparing the percent of the population in each tract at or below the selected indicator (in this case, a threshold of twice the Federal poverty threshold) to the percent in a reference area. This ensures that the results reflect the local context, by determining whether the census tract has more people living below the indicator than the general population of the area. Reference areas are typically larger than the area where a project is proposed, so that they can reasonably represent the general population. The Federal Interagency Working Group on

Environmental Justice & NEPA Committee's publication, *Promising Practices for Methodologies in NEPA Reviews* (March 2016), lists as examples of reference areas the county or state where a project is proposed.

Consistent with this approach, the EPA's EJSCREEN provides information on the percent of population in a given census block group in comparison to the percent in the state where that tract is located. Information is presented as percentiles, showing how much the census tract differs from the state level—the percentiles illustrate what percent of the state population has a higher value than the census tract.

For the CBD Tolling Program, given the Project's potential wide-ranging effects across a 28-county study area, a large reference area is appropriate. This avoids the potential of missing low-income populations, which might occur if a smaller area with a higher proportion of low-income people were selected. For this reason, the Project Sponsors used the 28-county region as the reference area. The proportion of low-income populations in the 28-county region was calculated as (1) the sum of individuals living in households with incomes up to twice (1.99 times) the Federal poverty rate in each of the 28 counties in the region divided by (2) the sum of individuals for whom poverty status has been determined in those same counties.

17A.6.3 Low-Income Populations in Regional Study Area

Similar to the approach for minority-population commuters, the environmental justice analysis also considers the Project's potential for effects on low-income-population commuters, travelers, or individuals in specific industries, businesses, or other groups that could be affected by increased costs associated with accessing the Manhattan CBD.

17A.6.3.1 Approach

To identify low-income commuters to the Manhattan CBD, data from the CTPP related to worker flows by income and mode was used. Information available from the CTPP that aligns as closely as possible with the threshold for census tracts was used to identify low-income drivers. A household income threshold of \$50,000 was used to identify low-income drivers. The rationale for this threshold is described below.

17A.6.3.2 Rationale for Methodology to Identify Low-Income Commuters

In identifying the low-income threshold for travelers in the regional study area, the Project Sponsors considered the following factors, to ensure that the approach reflects the local context for the Project and employs an appropriate methodological approach:

- The threshold used for identifying low-income commuters (and other travelers) should align, to the extent practicable, with the threshold used for identifying low-income census tracts.
- The threshold used for identifying low-income commuters (and other travelers) should be based on data that is readily available from the U.S. Census, without adjustments and estimations that might make the results difficult to explain or less clearly reliable.

Information on workers who travel to and from the Manhattan CBD for work is available from the CTPP, a product prepared by the U.S. Census Bureau. The CTPP provides information on flows of workers between

their home census tracts and work destinations. That information is available by travel mode for a range of household incomes. For travel mode by household income, data are available for the following household income categories:

- Up to \$34,999
- \$35,000-\$49,999
- \$50,000-\$74,999
- \$75,000 or more

However, the CTPP does not include information on the household size and composition for these commuters, so it is not possible to determine whether they have household incomes that are at or below twice the Federal poverty level, which is the low-income threshold for identifying low-income census tracts. Instead, a single household income threshold must be defined to identify low-income commuters. For this Project, the income threshold to define low-income travelers was based on the income threshold used to define low-income census tracts, twice the Federal poverty level, assuming the average household size in the Project study area.

As noted earlier and presented in **Table 17A-2** above, the Federal poverty threshold varies by family size, number of children, and number of people over age 65. The average household size for the Project study area is 2.8 people per household, based on the following average household sizes in 2019:

- 28-county regional study area: 2.78 persons per household
- 10-county study area consisting of New York City and the immediately surrounding areas: 2.82 persons per household
- New York City: 2.81 persons per household

Consequently, the Federal poverty threshold for the average-size family in the Project study area was approximately \$20,335 in 2019 (see **Table 17A-2**), and twice the Federal poverty threshold was approximately \$41,000.

Using the household income ranges available from the CTPP, the environmental justice analysis considered all workers with household incomes up to \$50,000 as low-income. This is approximately equivalent to, although higher than, the low-income threshold of twice the Federal poverty threshold for a three-person family, which is the average household size for the Project study area. Using this threshold allowed the Project Sponsors to use data directly available from the CTPP, without the need for adjustments or estimations.

17B, Environmental Justice Profile of Study Areas: Maps

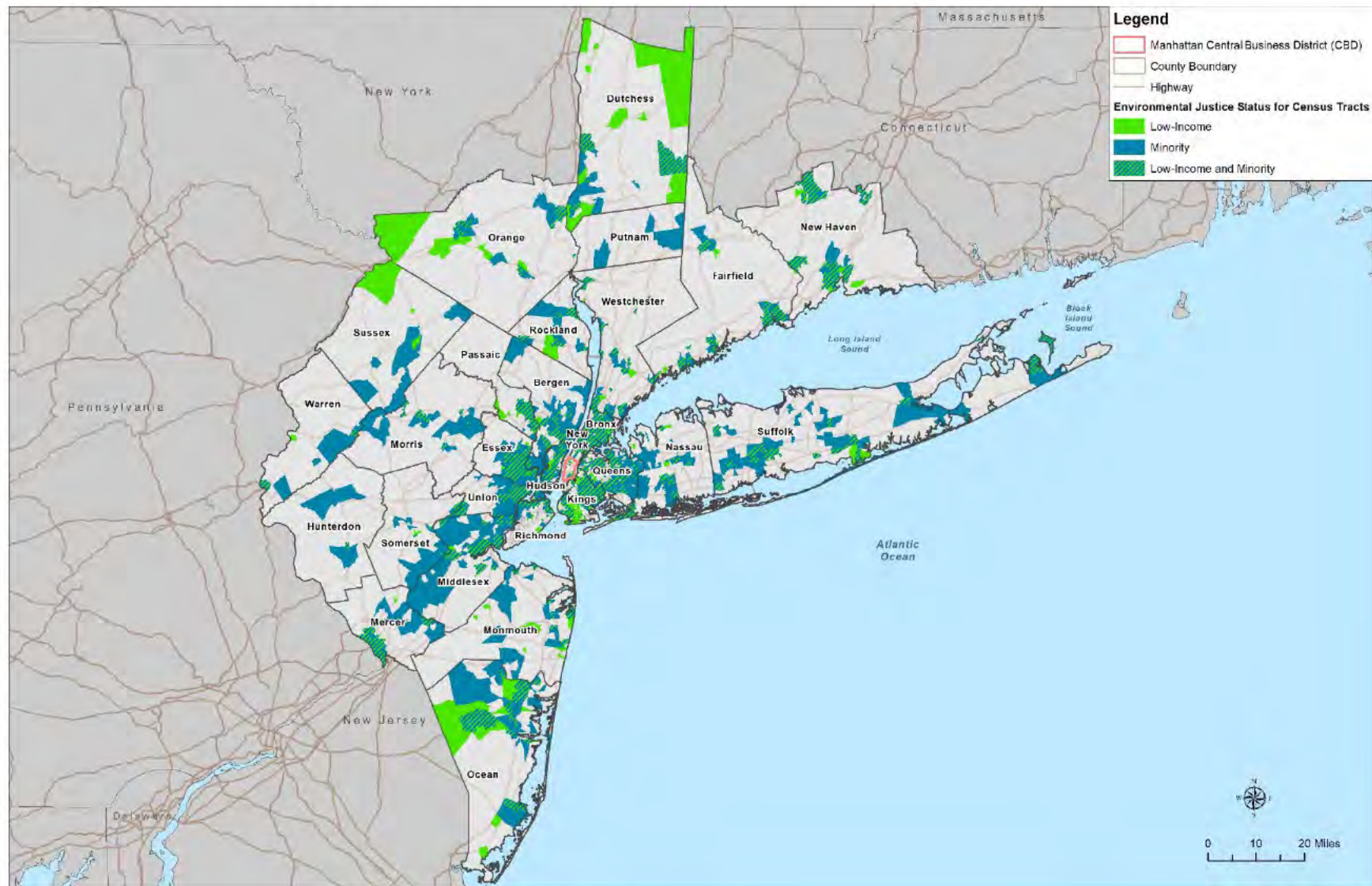
- Local Study Area Neighborhoods
 - Overview of Local Study Area
 - Central Business District, New York County (Manhattan), NY
 - Outside Central Business District, New York County (Manhattan), NY
 - Bronx County, NY
 - Kings County (Brooklyn), NY
 - Queens County, NY
 - Richmond County, NY
 - Nassau County, NY
 - Bergen County, NJ
 - Essex County and Union County, NJ
 - Hudson County, NJ
- Regional Study Area Neighborhoods Outside Local Study Area
 - Overview of Regional Study Area
 - Connecticut Counties: Fairfield and New Haven Counties
 - New Jersey Northern Counties: Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren Counties
 - New Jersey Southern Counties: Mercer, Middlesex, Monmouth, and Ocean Counties
 - New York Counties North of New York City: Dutchess, Putnam, Orange, Rockland, and Westchester Counties
 - Long Island County: Suffolk County, NY

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 - Long Island County: Suffolk County, NY

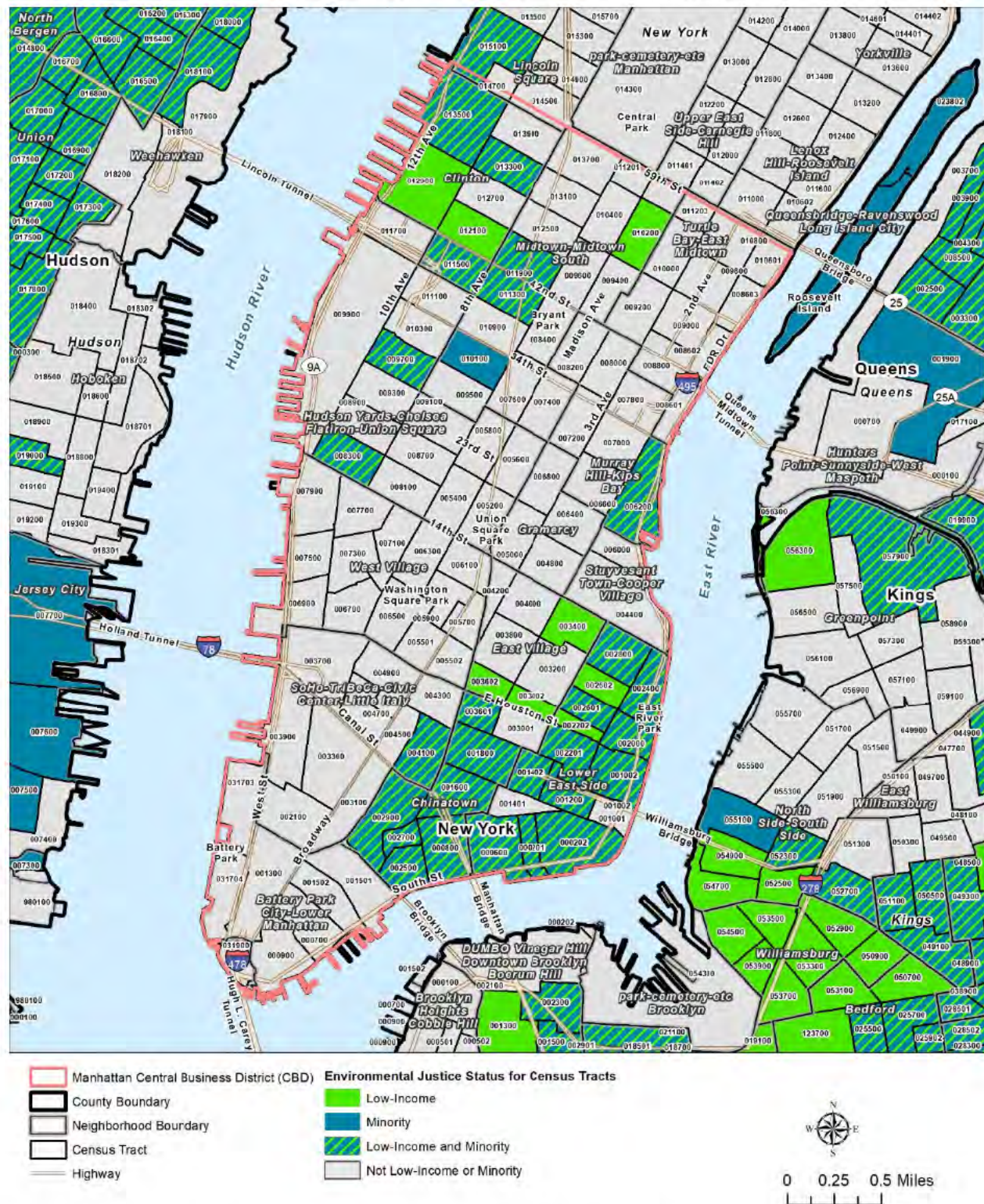
LOCAL STUDY AREA NEIGHBORHOODS

Figure 17B-1. Overview of Local Study Area



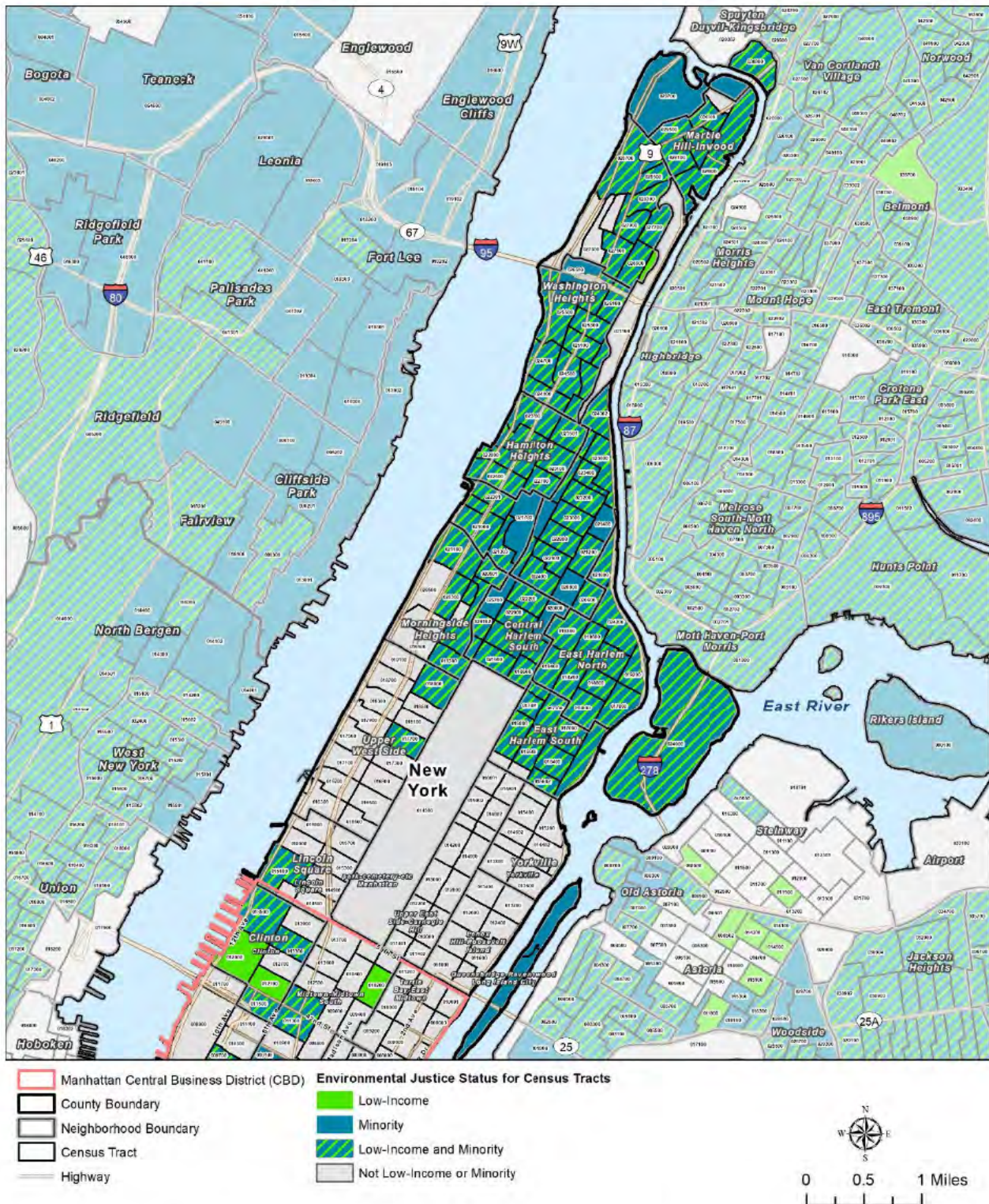
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Figure 17B-2. Central Business District, New York County (Manhattan), NY



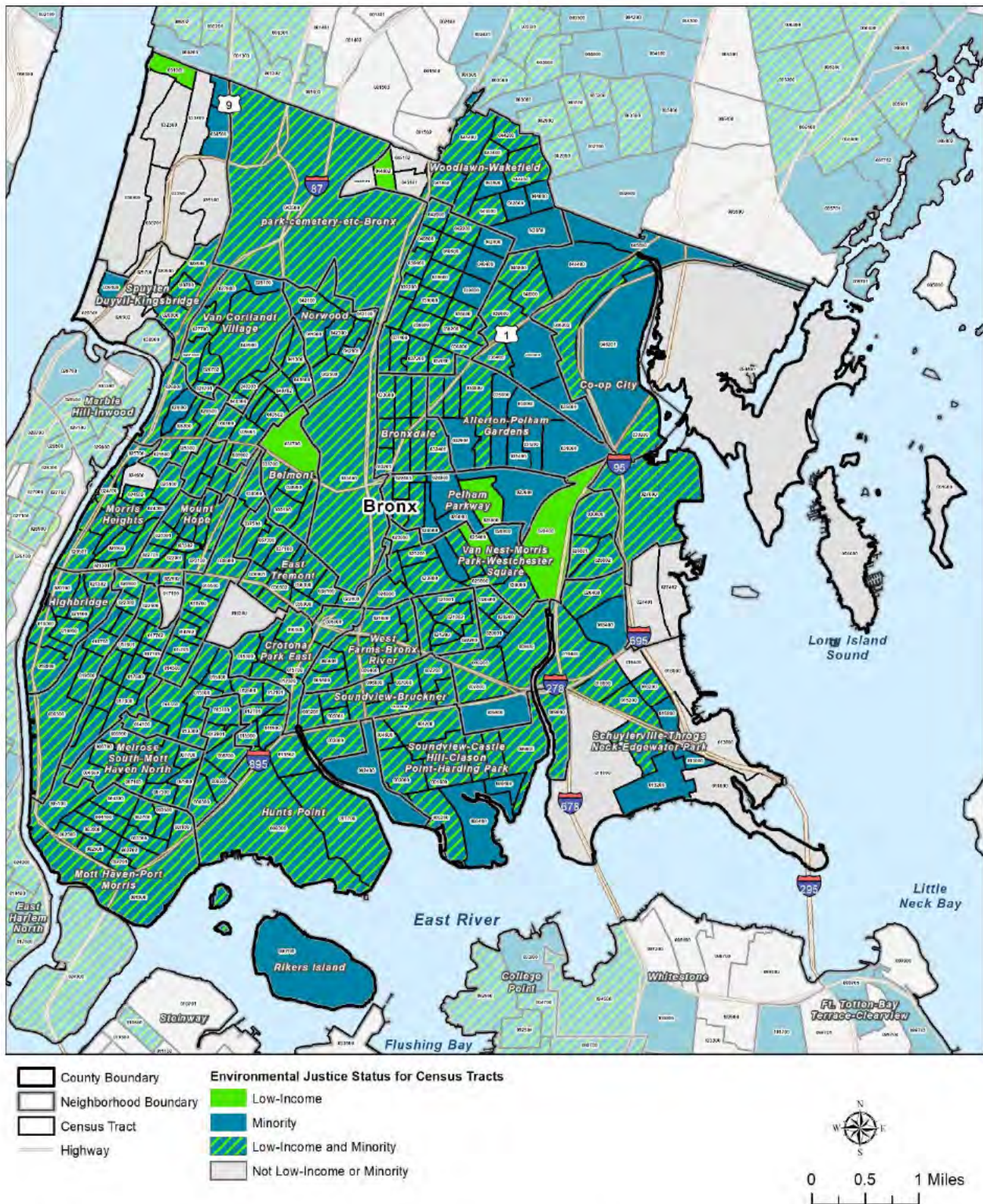
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-1 for specific information pertaining to this figure.

Figure 17B-3. Outside Central Business District, New York County (Manhattan), NY



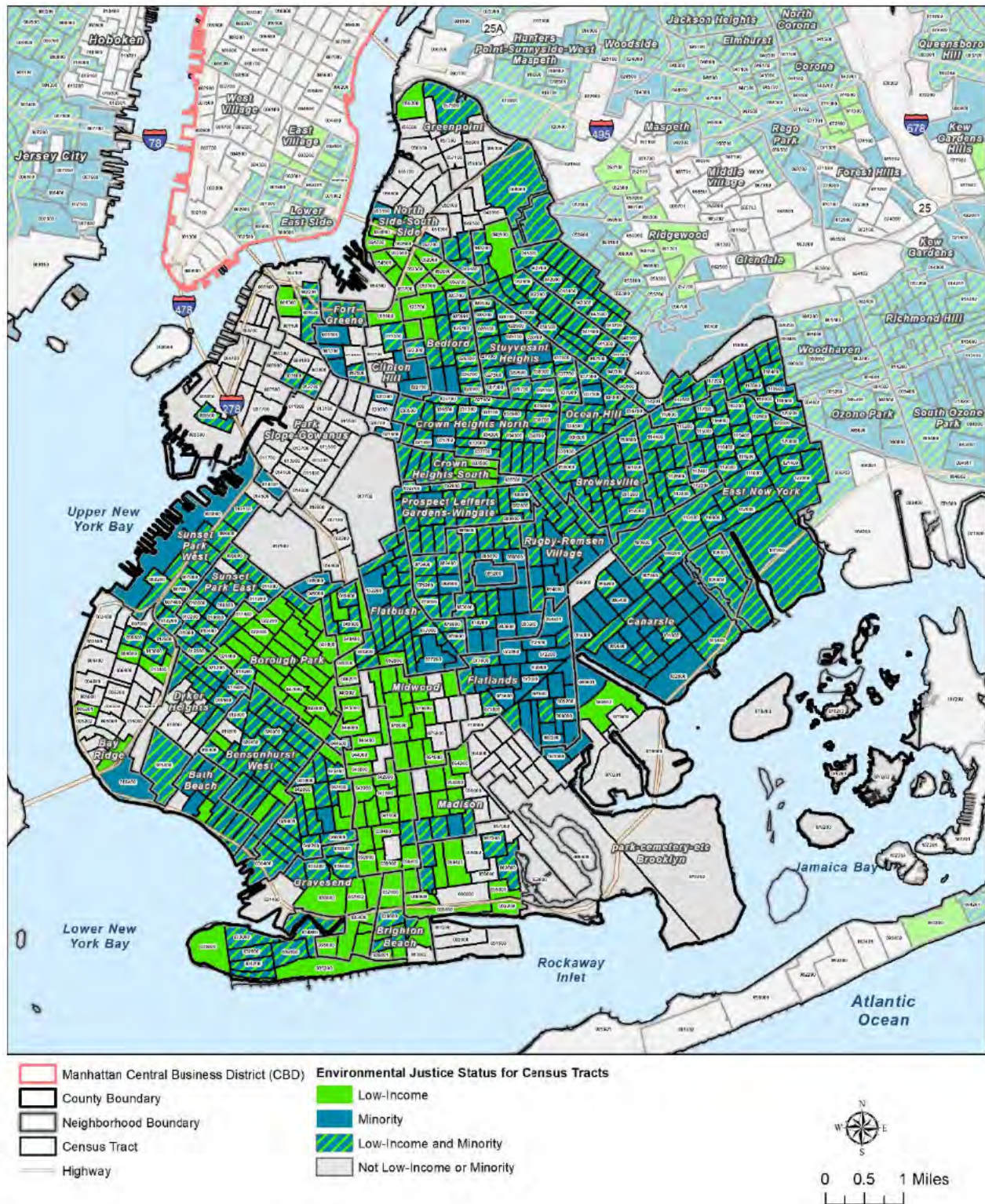
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-2 for specific information pertaining to this figure.

Figure 17B-4. Bronx County, NY



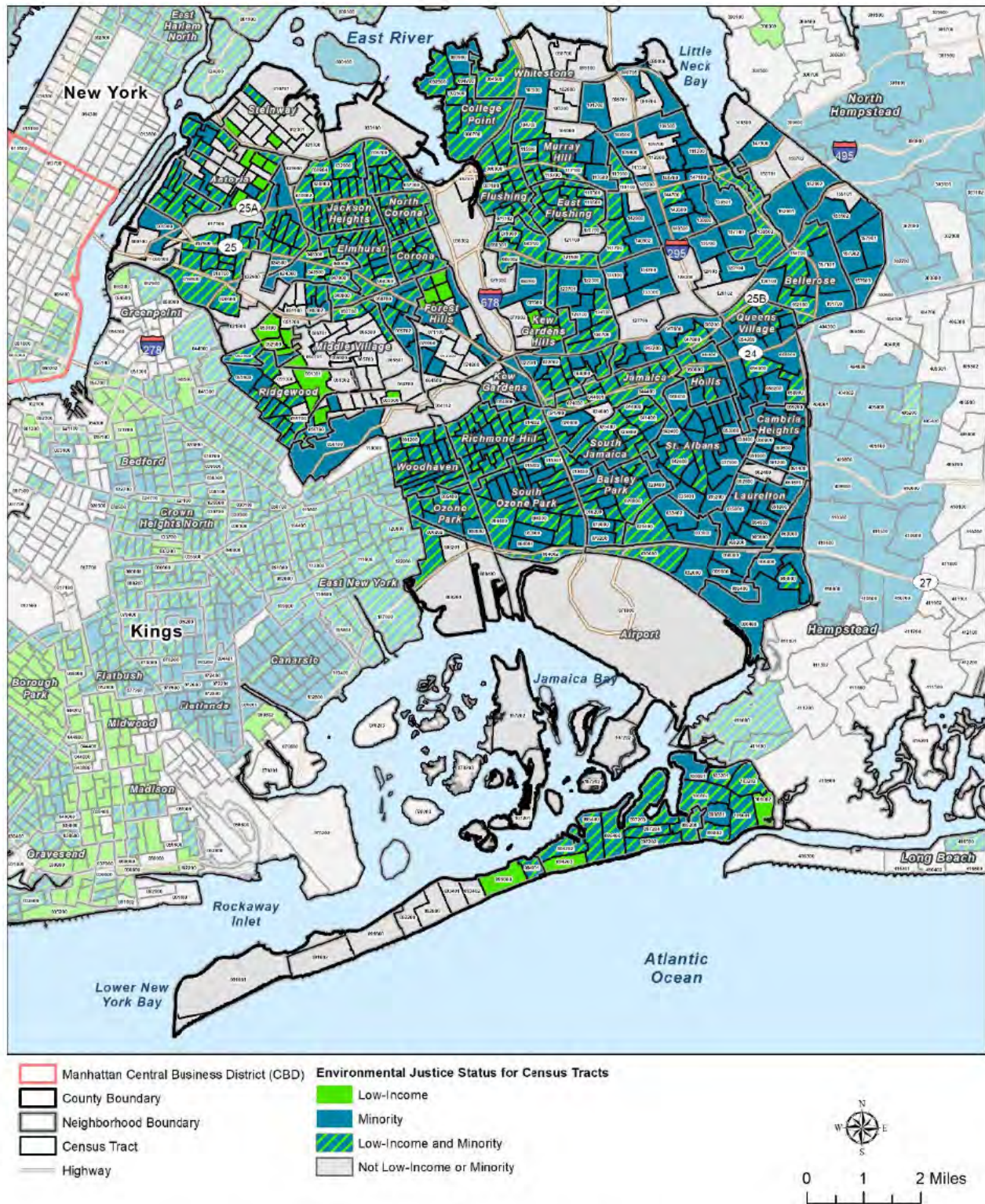
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-3 for specific information pertaining to this figure.

Figure 17B-5. Kings County (Brooklyn), NY



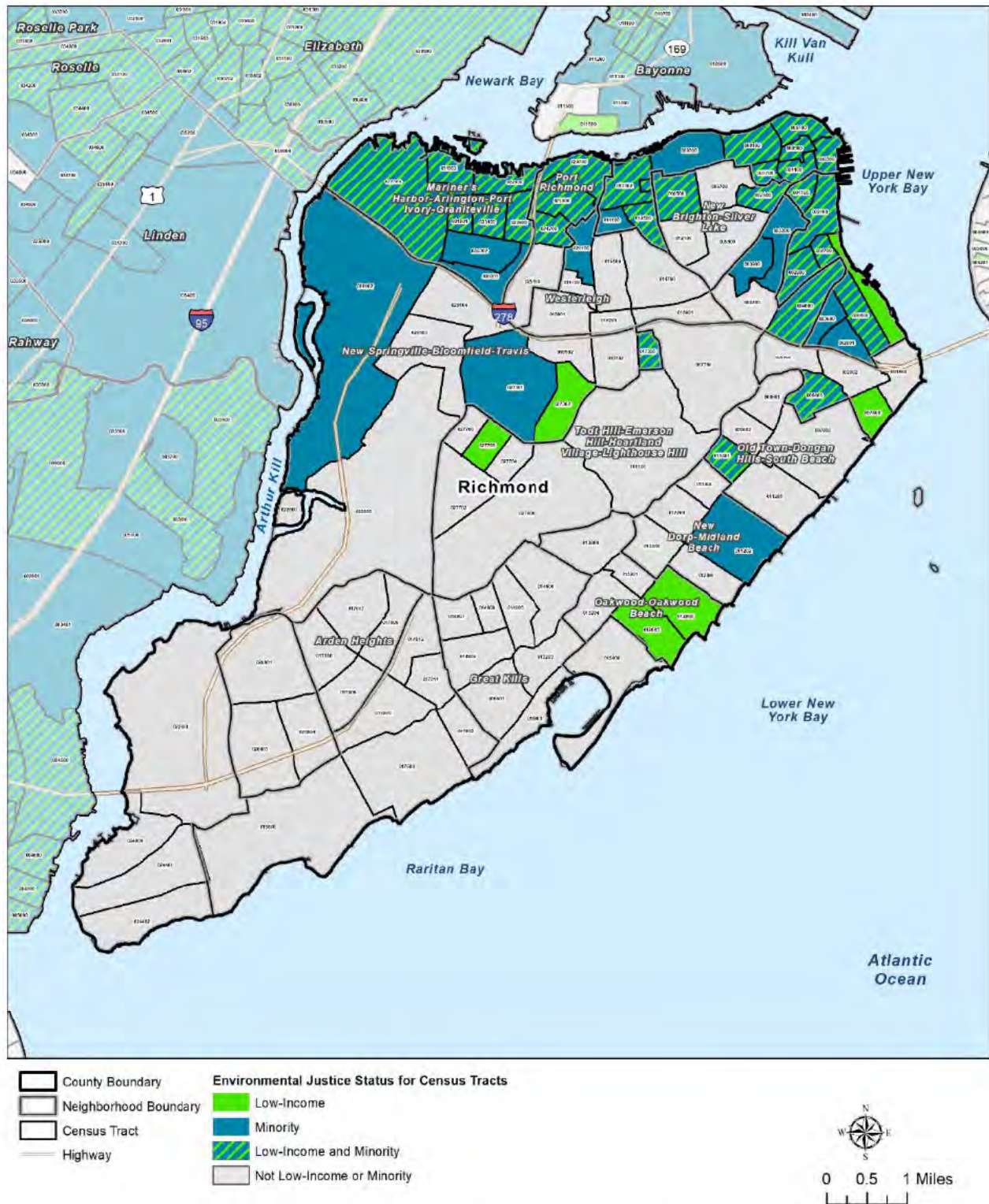
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-4 for specific information pertaining to this figure.

Figure 17B-6. Queens County, NY



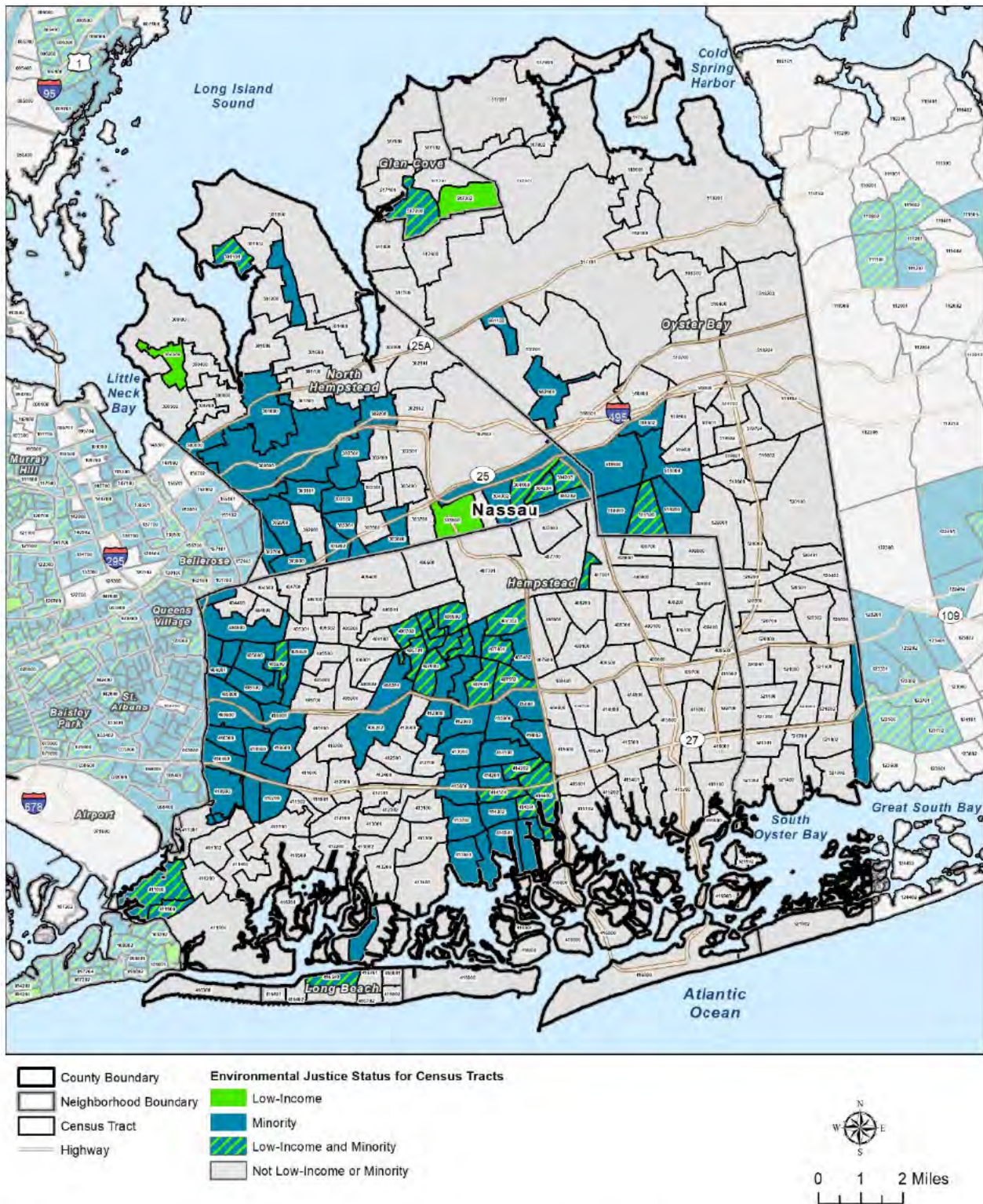
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-5 for specific information pertaining to this figure.

Figure 17B-7. Richmond County, NY



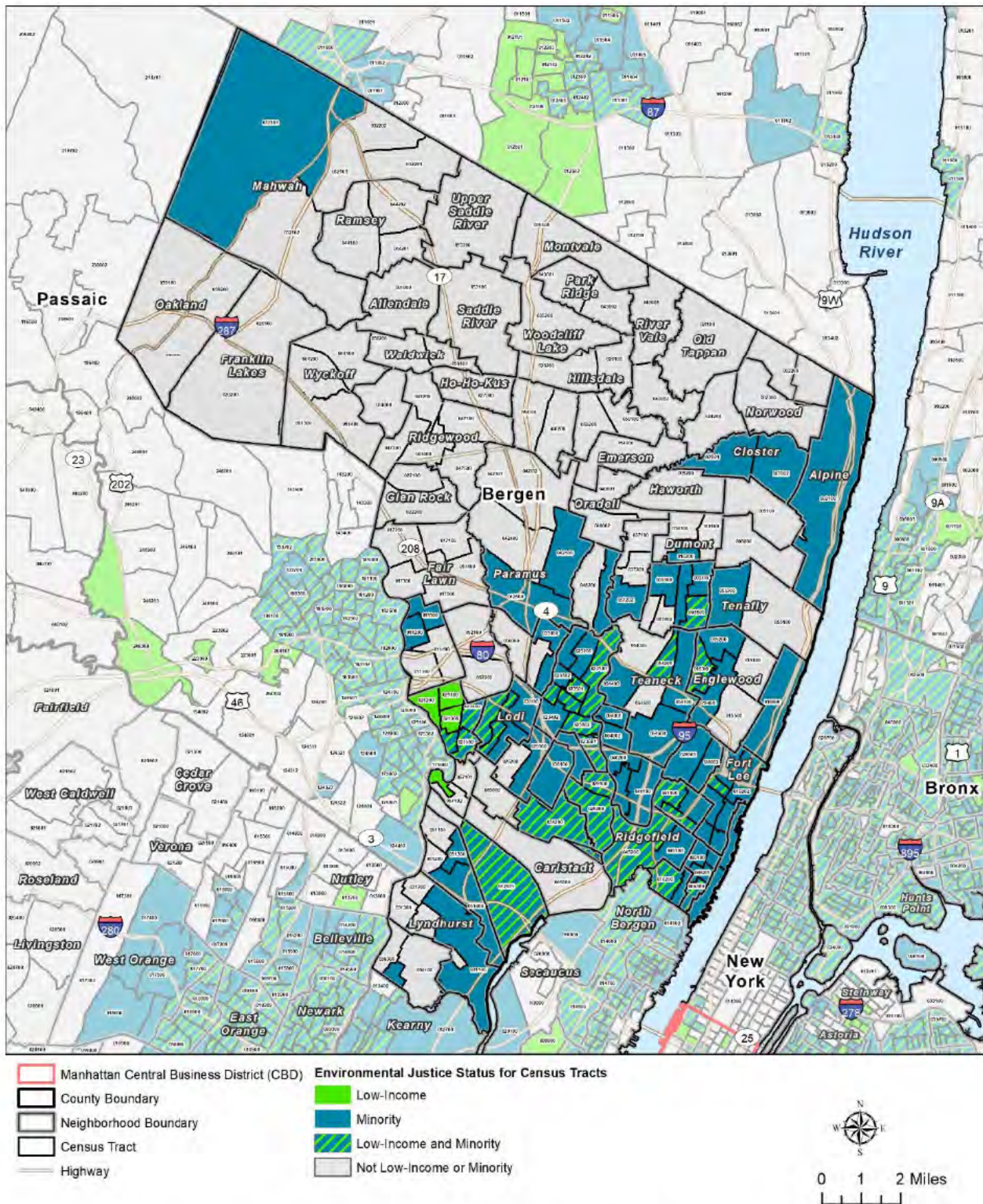
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-3 for specific information pertaining to this figure.

Figure 17B-8. Nassau County, NY



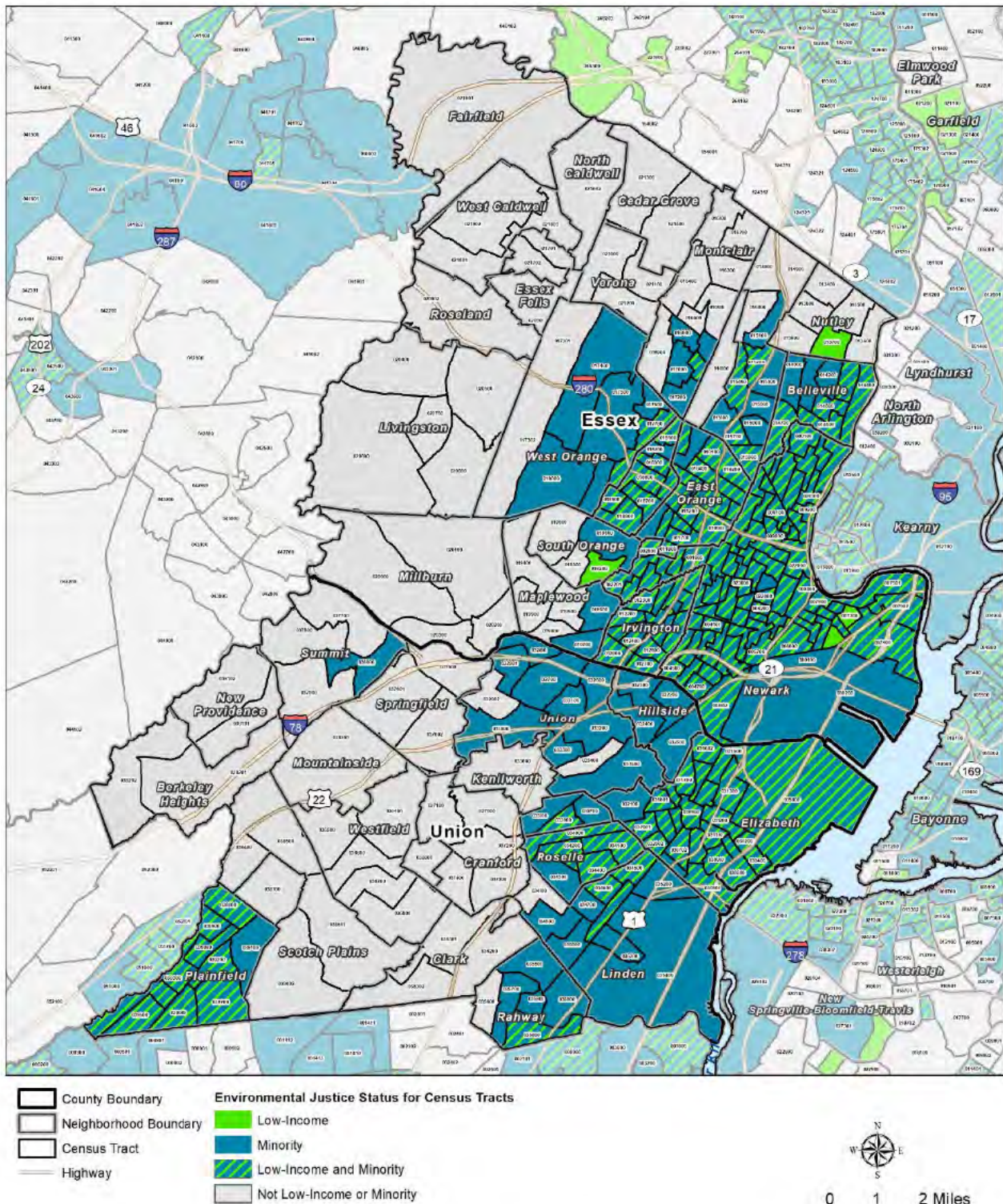
Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-7 for specific information pertaining to this figure.

Figure 17B-9. Bergen County, NJ



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
 Note: Refer to Appendix 17C, Table 17C-8 for specific information pertaining to this figure.

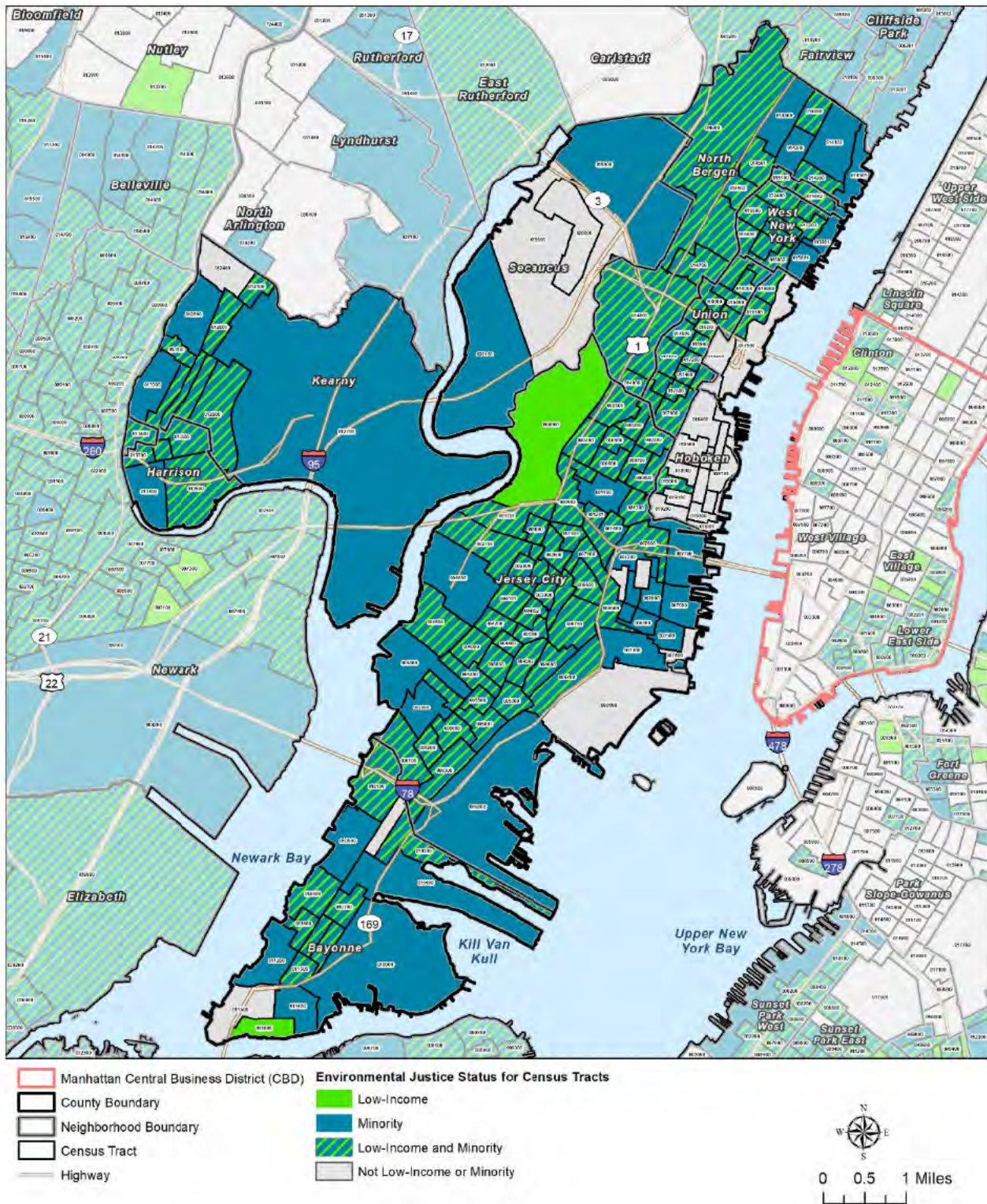
Figure 17B-10. Essex County and Union County, NJ



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-9 (Essex County) and Table 17C-11 (Union County) for specific information pertaining to this figure.

Figure 17B-11. Hudson County, NJ

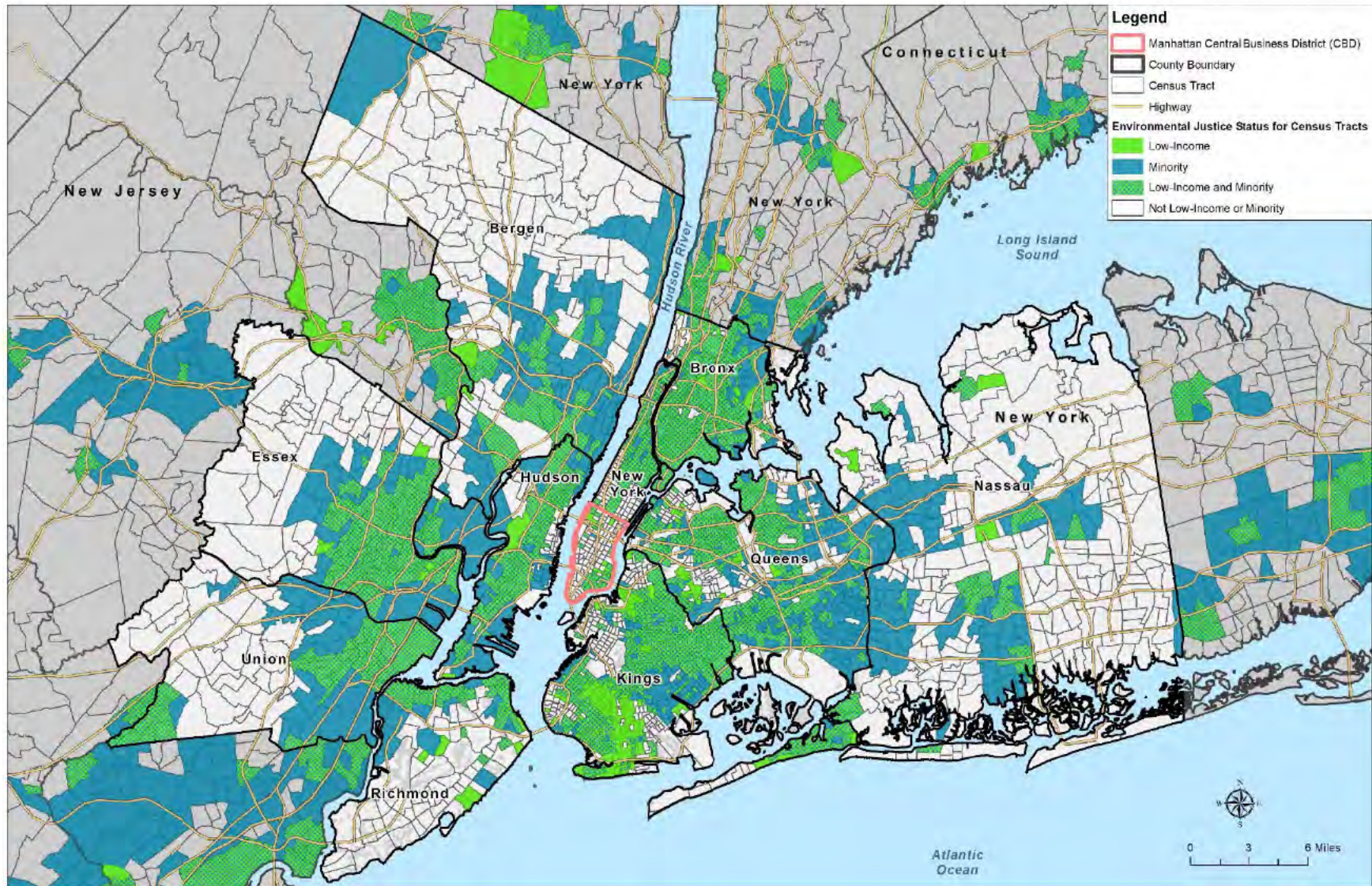


Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-10 for specific information pertaining to this figure.

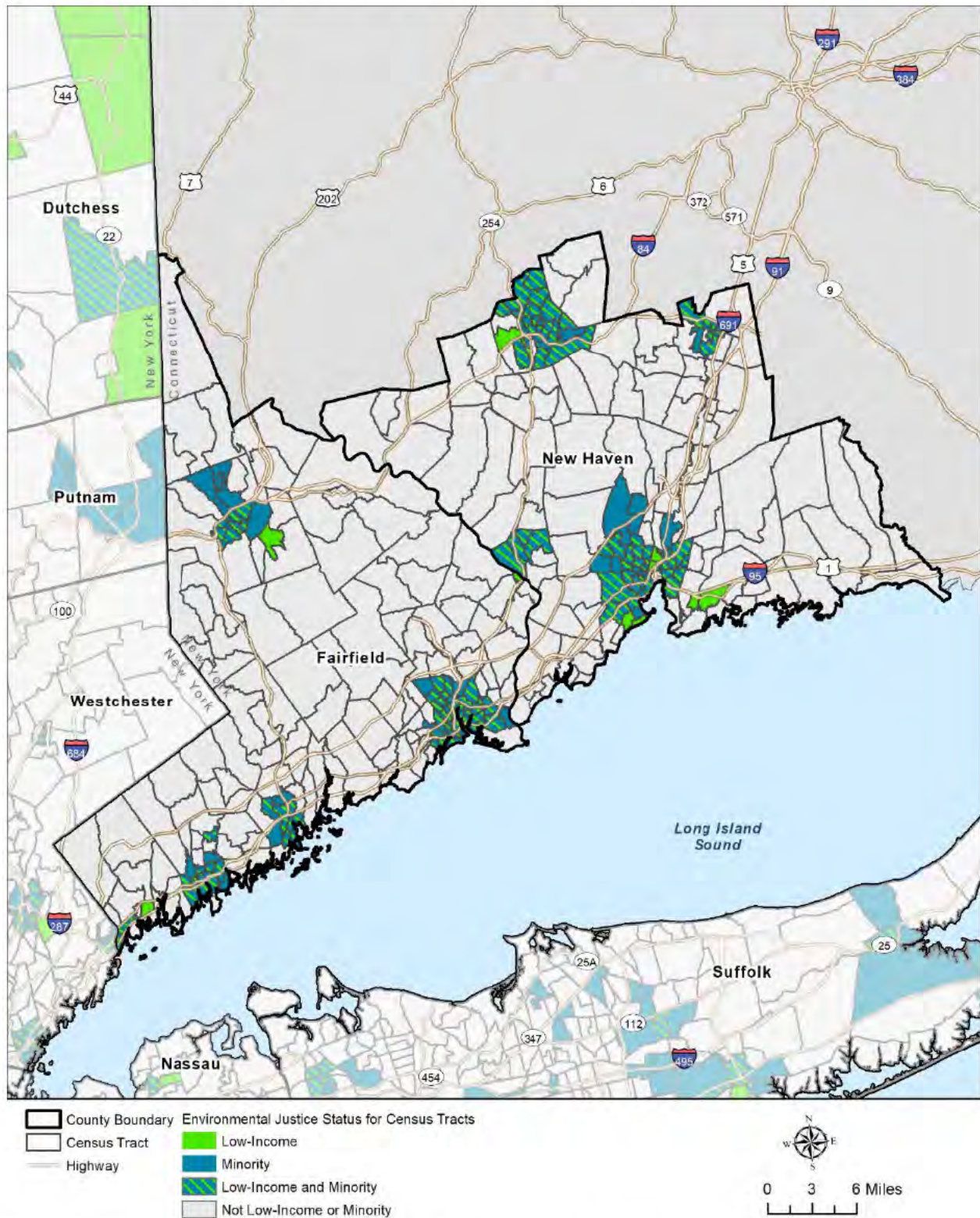
REGIONAL STUDY AREA NEIGHBORHOODS
OUTSIDE LOCAL STUDY AREA

Figure 17B-12. Overview of Regional Study Area



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

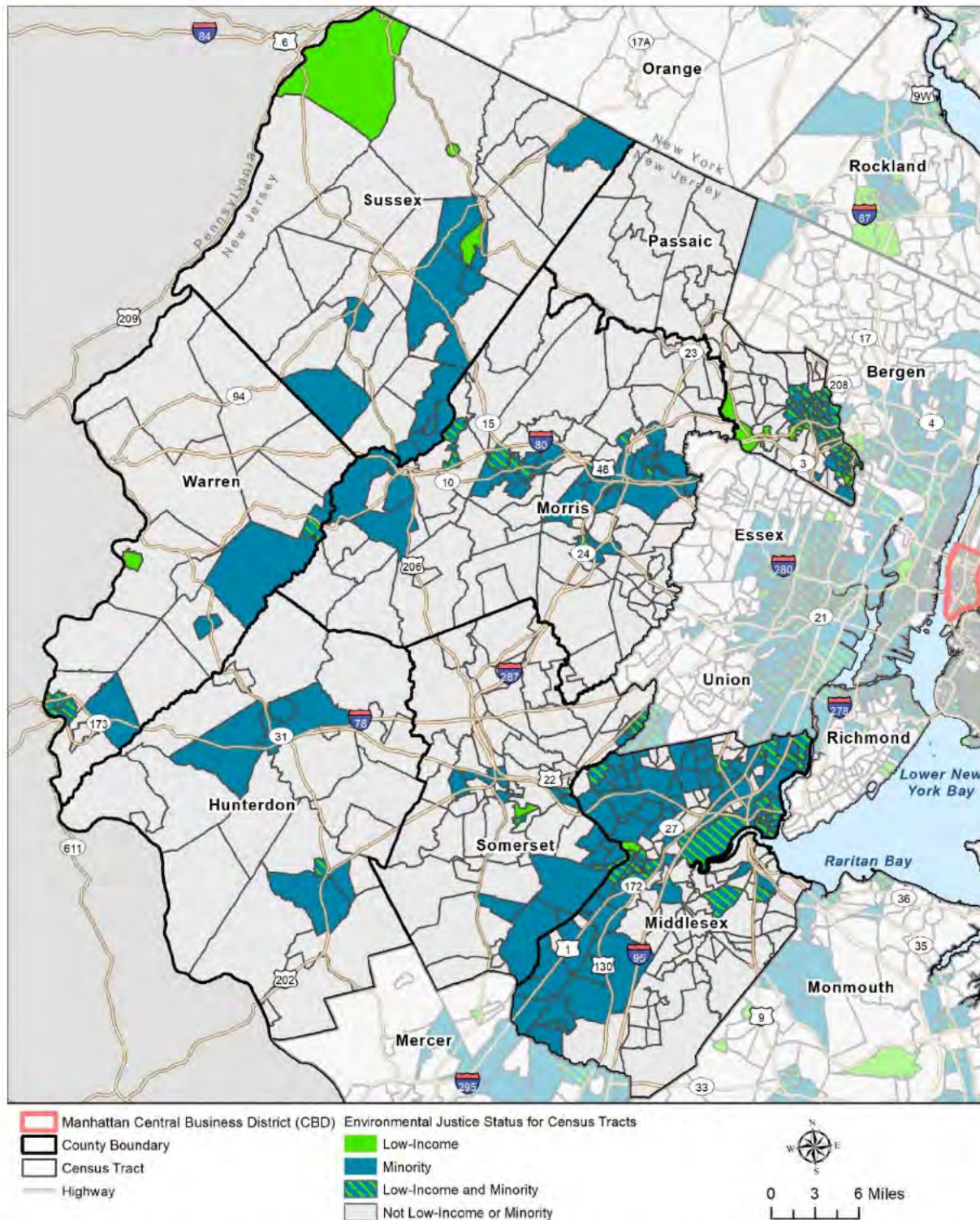
Figure 17B-13. Connecticut Counties: Fairfield and New Haven Counties



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-12 (Fairfield County) and Table 17C-13 (New Haven County) for specific information pertaining to this figure.

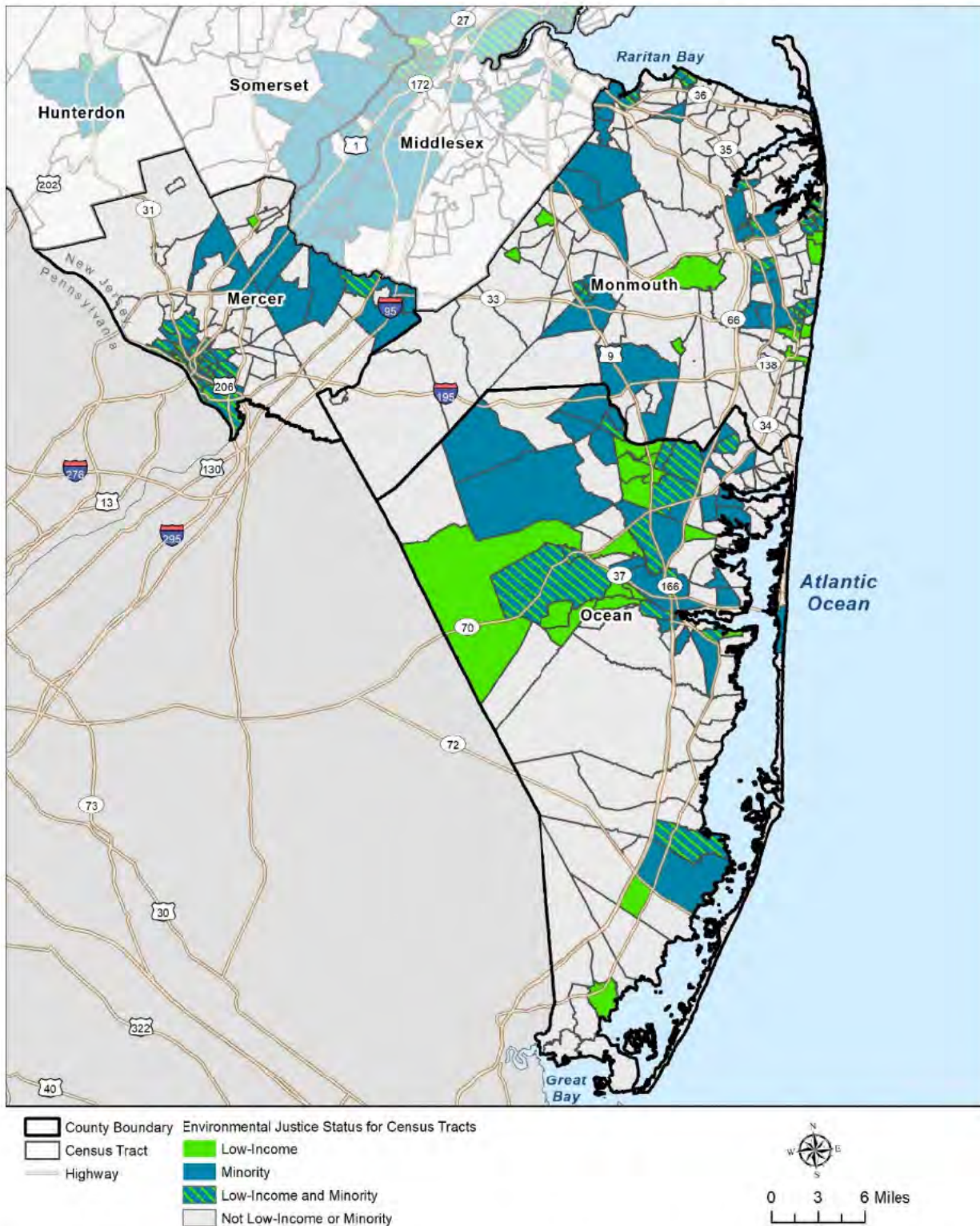
Figure 17B-14. New Jersey Northern Counties: Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren Counties



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-14 (Hunterdon County), Table 17C-18 (Morris County), Table 17C-20 (Passaic County), Table 17C-21 (Somerset County), Table 17C-22 (Sussex County), and Table 17C-23 (Warren County) for specific information pertaining to this figure.

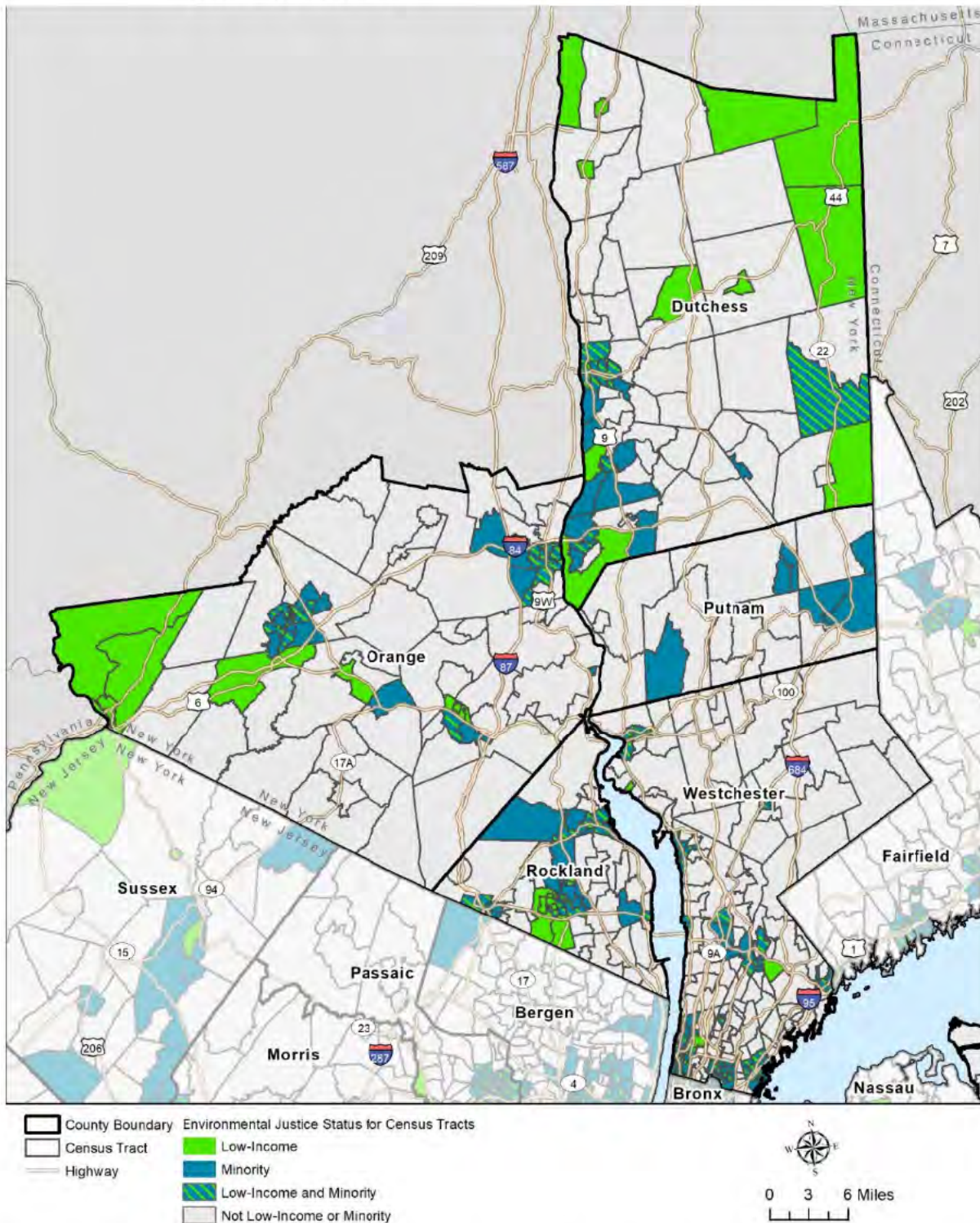
Figure 17B-15. New Jersey Southern Counties: Mercer, Middlesex, Monmouth, and Ocean Counties



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-15 (Mercer County), Table 17C-16 (Middlesex County), Table 17C-17 (Monmouth County), and Table 17C-19 (Ocean County) for specific information pertaining to this figure.

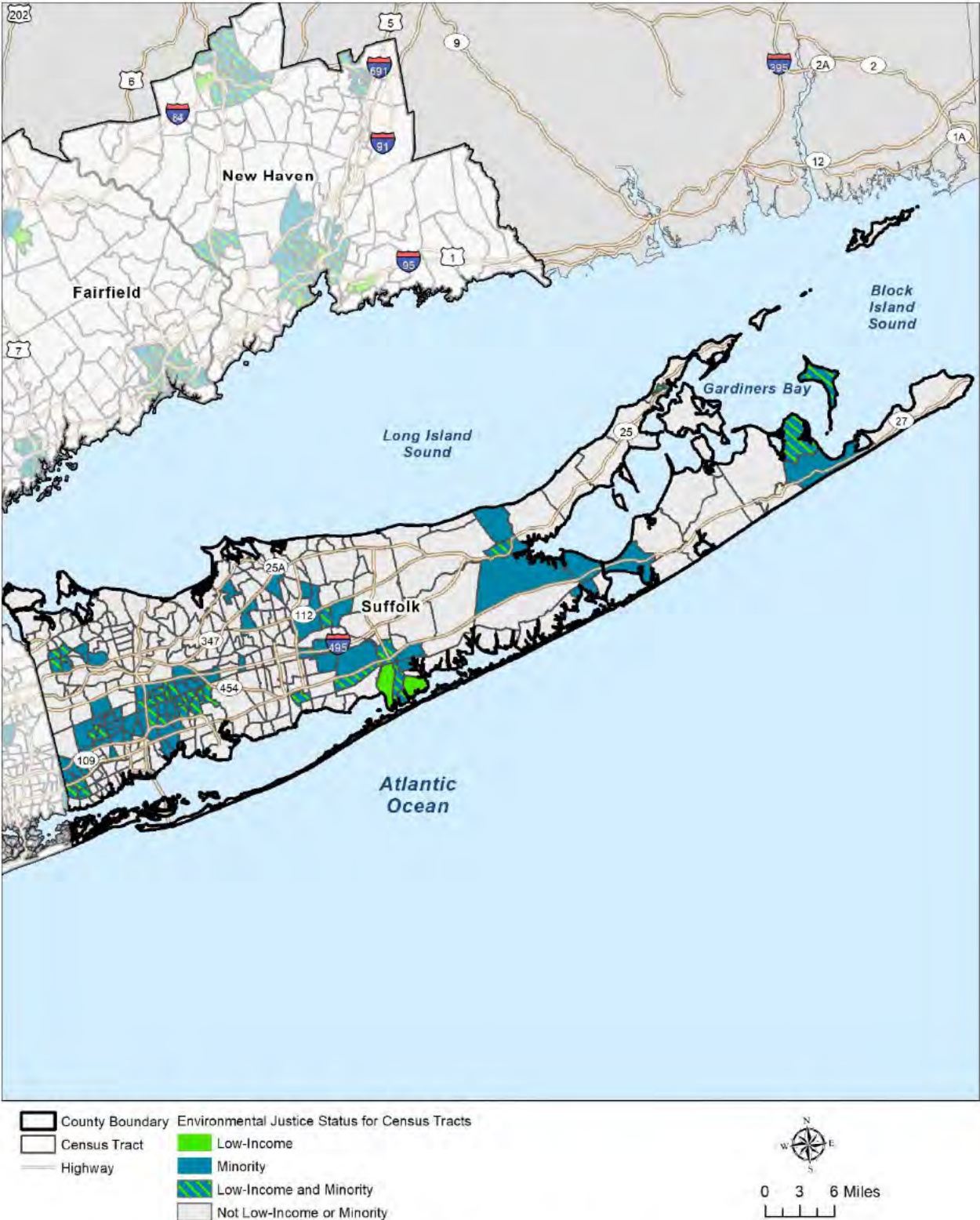
Figure 17B-16. New York Counties North of New York City: Dutchess, Putnam, Orange, Rockland, and Westchester Counties



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.

Note: Refer to Appendix 17C, Table 17C-24 (Dutchess County), Table 17C-26 (Putnam County), Table 17C-25 (Orange County), Table 17C-27 (Rockland County), and Table 17C-29 (Westchester County) for specific information pertaining to this figure.

Figure 17B-17. Long Island County: Suffolk County, NY



Source: U.S. Census Bureau American Community Survey 2015–2019 5-Year Estimates.
Note: Refer to Appendix 17C, Table 17C-28 (Suffolk County) for specific information pertaining to this figure.

17C, Environmental Justice Profile of Study Areas: Tables

- Local Study Area Neighborhoods
 - Central Business District, New York County (Manhattan), NY
 - Outside Central Business District, New York County (Manhattan), NY
 - Bronx County, NY
 - Kings County (Brooklyn), NY
 - Queens County, NY
 - Richmond County, NY
 - Nassau County, NY
 - Bergen County, NJ
 - Essex County, NJ
 - Hudson County, NJ
 - Union County, NJ
- Regional Study Area Neighborhoods Outside Local Study Area
 - Fairfield County, CT
 - New Haven County, CT
 - Hunterdon County, NJ
 - Mercer County, NJ
 - Middlesex County, NJ
 - Monmouth County, NJ
 - Morris County, NJ
 - Ocean County, NJ
 - Passaic County, NJ
 - Somerset County, NJ
 - Sussex County, NJ
 - Warren County, NJ
 - Dutchess County, NY
 - Orange County, NY
 - Putnam County, NY
 - Rockland County, NY
 - Suffolk County, NY
 - Westchester County, NY

LOCAL STUDY AREA NEIGHBORHOODS

Table 17C-3

Environmental Justice Populations: Bronx County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Bronx County, New York										
Allerton-Pelham Gardens										
Census Tract 312	1,678	1,115	66.4%	Yes		1,677	210	12.5%		No
Census Tract 360	3,271	2,883	88.1%	Yes		3,075	779	25.3%		No
Census Tract 314	2,079	1,341	64.5%	Yes		1,892	301	15.9%		No
Census Tract 316	1,900	1,222	64.3%	Yes		1,900	373	19.6%		No
Census Tract 318	2,179	1,549	71.1%	Yes		2,008	546	27.2%	Yes	
Census Tract 326	3,407	2,098	61.6%	Yes		3,212	665	20.7%		No
Census Tract 342	1,888	1,725	91.4%	Yes		1,888	632	33.5%	Yes	
Census Tract 344	2,172	2,110	97.1%	Yes		2,164	763	35.3%	Yes	
Census Tract 348	5,707	5,554	97.3%	Yes		5,693	2,042	35.9%	Yes	
Census Tract 350	2,063	1,946	94.3%	Yes		2,051	525	25.6%		No
Census Tract 310	4,753	3,385	71.2%	Yes		3,876	674	17.4%		No
TOTAL Allerton-Pelham Gardens	31,097	24,928	80.2%	11	-	29,436	7,510	25.5%	4	7
Bedford Park-Fordham North										
Census Tract 237.02	1,180	1,169	99.1%	Yes		1,180	669	56.7%	Yes	
Census Tract 399.01	5,618	5,457	97.1%	Yes		5,564	3,962	71.2%	Yes	
Census Tract 399.02	5,646	5,432	96.2%	Yes		5,646	3,788	67.1%	Yes	
Census Tract 401	4,478	4,390	98.0%	Yes		4,467	3,012	67.4%	Yes	
Census Tract 403.02	4,192	4,115	98.2%	Yes		4,181	2,442	58.4%	Yes	
Census Tract 405.01	4,399	4,311	98.0%	Yes		4,368	2,663	61.0%	Yes	
Census Tract 405.02	7,264	7,177	98.8%	Yes		7,250	4,372	60.3%	Yes	
Census Tract 407.02	7,023	6,672	95.0%	Yes		7,016	3,625	51.7%	Yes	
Census Tract 411	3,510	3,173	90.4%	Yes		3,483	1,734	49.8%	Yes	
Census Tract 413	8,677	8,020	92.4%	Yes		8,574	3,509	40.9%	Yes	
Census Tract 415	6,367	5,869	92.2%	Yes		6,308	3,361	53.3%	Yes	
TOTAL Bedford Park-Fordham North	58,354	55,785	95.6%	11	-	58,037	33,137	57.1%	11	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Belmont										
Census Tract 387	3,823	3,242	84.8%	Yes		3,798	2,545	67.0%	Yes	
Census Tract 389	5,521	4,239	76.8%	Yes		5,431	3,547	65.3%	Yes	
Census Tract 391	7,544	7,007	92.9%	Yes		7,544	5,294	70.2%	Yes	
Census Tract 393	8,330	8,029	96.4%	Yes		8,316	5,534	66.5%	Yes	
Census Tract 397	3,744	1,617	43.2%		No	1,109	501	45.2%	Yes	
TOTAL Belmont	28,962	24,134	83.3%	4	1	26,198	17,421	66.5%	5	-
Bronxdale										
Census Tract 324	3,177	2,815	88.6%	Yes		3,098	2,208	71.3%	Yes	
Census Tract 328	3,839	3,323	86.6%	Yes		3,838	2,341	61.0%	Yes	
Census Tract 330	5,776	3,270	56.6%	Yes		5,742	2,922	50.9%	Yes	
Census Tract 332.01	5,564	4,727	85.0%	Yes		5,544	2,583	46.6%	Yes	
Census Tract 332.02	4,033	3,526	87.4%	Yes		3,588	1,345	37.5%	Yes	
Census Tract 336	6,714	6,499	96.8%	Yes		6,694	3,225	48.2%	Yes	
Census Tract 338	4,105	3,871	94.3%	Yes		4,088	1,572	38.5%	Yes	
Census Tract 340	5,606	5,301	94.6%	Yes		5,563	2,872	51.6%	Yes	
TOTAL Bronxdale	38,814	33,332	85.9%	8	-	38,155	19,068	50.0%	8	-
Claremont-Bathgate										
Census Tract 145	7,436	7,203	96.9%	Yes		7,173	5,566	77.6%	Yes	
Census Tract 147.01	7,003	6,949	99.2%	Yes		6,866	5,829	84.9%	Yes	
Census Tract 147.02	5,435	5,371	98.8%	Yes		5,435	3,539	65.1%	Yes	
Census Tract 165	965	965	100.0%	Yes		965	661	68.5%	Yes	
Census Tract 167	3,695	3,663	99.1%	Yes		3,491	2,342	67.1%	Yes	
Census Tract 169	1,633	1,628	99.7%	Yes		1,572	952	60.6%	Yes	
Census Tract 385	4,766	4,738	99.4%	Yes		4,760	3,439	72.2%	Yes	
Census Tract 395	4,257	4,226	99.3%	Yes		4,211	2,591	61.5%	Yes	
TOTAL Claremont-Bathgate	35,190	34,743	98.7%	8	-	34,473	24,919	72.3%	8	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Co-op City										
Census Tract 302	8,704	8,262	94.9%	Yes		8,702	2,351	27.0%	Yes	
Census Tract 462.01	28,109	26,126	92.9%	Yes		26,914	6,894	25.6%		No
Census Tract 462.02	9,912	9,798	98.8%	Yes		9,124	3,890	42.6%	Yes	
TOTAL Co-op City	46,725	44,186	94.6%	3	-	44,740	13,135	29.4%	2	1
Crotona Park East										
Census Tract 60	1,386	1,377	99.4%	Yes		1,386	845	61.0%	Yes	
Census Tract 123	4,268	4,217	98.8%	Yes		4,237	2,237	52.8%	Yes	
Census Tract 153	4,474	4,460	99.7%	Yes		4,425	2,771	62.6%	Yes	
Census Tract 155	2,927	2,927	100.0%	Yes		2,927	2,198	75.1%	Yes	
Census Tract 157	4,704	4,650	98.9%	Yes		4,682	2,871	61.3%	Yes	
Census Tract 161	4,650	4,623	99.4%	Yes		4,650	3,375	72.6%	Yes	
TOTAL Crotona Park East	22,409	22,254	99.3%	6	-	22,307	14,297	64.1%	6	-
East Concourse-Concourse Village										
Census Tract 59.02	2,751	2,618	95.2%	Yes		2,751	1,684	61.2%	Yes	
Census Tract 61	3,720	3,607	97.0%	Yes		3,720	1,060	28.5%	Yes	
Census Tract 183.01	4,320	4,073	94.3%	Yes		4,320	1,770	41.0%	Yes	
Census Tract 177.02	5,423	5,315	98.0%	Yes		5,423	3,180	58.6%	Yes	
Census Tract 143	1,482	1,469	99.1%	Yes		1,464	1,207	82.4%	Yes	
Census Tract 173	5,746	5,583	97.2%	Yes		5,733	3,732	65.1%	Yes	
Census Tract 175	6,536	6,351	97.2%	Yes		6,433	4,166	64.8%	Yes	
Census Tract 177.01	4,650	4,588	98.7%	Yes		4,236	2,436	57.5%	Yes	
Census Tract 179.01	4,831	4,770	98.7%	Yes		4,831	2,827	58.5%	Yes	
Census Tract 179.02	4,032	4,014	99.6%	Yes		4,032	2,091	51.9%	Yes	
Census Tract 181.01	3,351	3,340	99.7%	Yes		3,350	1,832	54.7%	Yes	
Census Tract 181.02	5,294	5,199	98.2%	Yes		5,061	3,382	66.8%	Yes	
Census Tract 183.02	3,824	3,723	97.4%	Yes		3,824	2,038	53.3%	Yes	
Census Tract 225	8,499	8,187	96.3%	Yes		8,153	5,191	63.7%	Yes	
TOTAL East Concourse-Concourse Village	64,459	62,837	97.5%	14	-	63,331	36,596	57.8%	14	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
East Tremont										
Census Tract 359	2,053	2,042	99.5%	Yes		2,040	1,370	67.2%	Yes	
Census Tract 361	5,576	5,551	99.6%	Yes		5,553	3,865	69.6%	Yes	
Census Tract 365.02	2,620	2,586	98.7%	Yes		2,581	1,450	56.2%	Yes	
Census Tract 367	2,395	2,350	98.1%	Yes		2,179	1,373	63.0%	Yes	
Census Tract 369.02	2,074	2,038	98.3%	Yes		2,074	1,433	69.1%	Yes	
Census Tract 363	7,517	7,294	97.0%	Yes		7,478	5,001	66.9%	Yes	
Census Tract 365.01	3,901	3,889	99.7%	Yes		3,887	2,311	59.5%	Yes	
Census Tract 369.01	2,101	2,098	99.9%	Yes		2,089	1,490	71.3%	Yes	
Census Tract 371	4,226	4,172	98.7%	Yes		4,220	2,685	63.6%	Yes	
Census Tract 373	6,373	6,321	99.2%	Yes		6,339	3,493	55.1%	Yes	
Census Tract 375.04	3,323	3,232	97.3%	Yes		3,103	2,361	76.1%	Yes	
Census Tract 220	2,007	1,977	98.5%	Yes		1,894	1,236	65.3%	Yes	
TOTAL East Tremont	44,166	43,550	98.6%	12	-	43,437	28,068	64.6%	12	-
Eastchester-Edenwald-Baychester										
Census Tract 356	2,254	2,221	98.5%	Yes		2,229	559	25.1%		No
Census Tract 358	8,172	7,766	95.0%	Yes		8,053	1,850	23.0%		No
Census Tract 460	3,246	3,135	96.6%	Yes		3,006	1,246	41.5%	Yes	
Census Tract 364	2,565	2,564	100.0%	Yes		2,565	766	29.9%	Yes	
Census Tract 386	8,889	8,886	100.0%	Yes		8,872	3,953	44.6%	Yes	
Census Tract 458	5,744	5,720	99.6%	Yes		5,644	4,541	80.5%	Yes	
Census Tract 456	3,220	2,773	86.1%	Yes		3,195	776	24.3%		No
Census Tract 484	4,277	4,175	97.6%	Yes		4,203	819	19.5%		No
TOTAL Eastchester-Edenwald-Baychester	38,367	37,240	97.1%	8	-	37,767	14,510	38.4%	4	4
Fordham South										
Census Tract 237.03	5,574	5,503	98.7%	Yes		5,448	3,109	57.1%	Yes	
Census Tract 237.04	3,803	3,789	99.6%	Yes		3,802	3,295	86.7%	Yes	
Census Tract 239	7,873	7,873	100.0%	Yes		7,836	4,951	63.2%	Yes	
Census Tract 383.01	5,084	5,013	98.6%	Yes		5,057	2,885	57.0%	Yes	
Census Tract 383.02	6,032	5,999	99.5%	Yes		6,008	4,696	78.2%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
TOTAL Fordham South	28,366	28,177	99.3%	5	-	28,151	18,936	67.3%	5	-
Highbridge										
Census Tract 189	8,210	7,870	95.9%	Yes		8,066	5,177	64.2%	Yes	
Census Tract 193	6,350	6,329	99.7%	Yes		6,350	4,767	75.1%	Yes	
Census Tract 199	8,338	8,195	98.3%	Yes		8,338	4,183	50.2%	Yes	
Census Tract 201	3,993	3,861	96.7%	Yes		3,943	2,528	64.1%	Yes	
Census Tract 211	5,343	5,303	99.3%	Yes		5,299	3,437	64.9%	Yes	
Census Tract 213.02	5,513	5,495	99.7%	Yes		5,513	3,442	62.4%	Yes	
Census Tract 219	882	849	96.3%	Yes		872	424	48.6%	Yes	
TOTAL Highbridge	38,629	37,902	98.1%	7	-	38,381	23,958	62.4%	7	-
Hunts Point										
Census Tract 89	3,218	3,170	98.5%	Yes		3,215	1,981	61.6%	Yes	
Census Tract 93	6,154	6,015	97.7%	Yes		5,461	3,652	66.9%	Yes	
Census Tract 115.02	4,582	4,549	99.3%	Yes		4,394	3,005	68.4%	Yes	
Census Tract 117	1,443	1,427	98.9%	Yes		1,443	1,059	73.4%	Yes	
Census Tract 119	5,440	5,241	96.3%	Yes		5,437	3,705	68.1%	Yes	
Census Tract 121.02	1,447	1,442	99.7%	Yes		1,447	1,059	73.2%	Yes	
Census Tract 127.01	1,928	1,892	98.1%	Yes		1,918	1,233	64.3%	Yes	
Census Tract 159	1,969	1,955	99.3%	Yes		1,959	1,400	71.5%	Yes	
TOTAL Hunts Point	26,181	25,691	98.1%	8	-	25,274	17,094	67.6%	8	-
Kingsbridge Heights										
Census Tract 253	6,199	6,175	99.6%	Yes		6,145	3,966	64.5%	Yes	
Census Tract 255	7,674	7,441	97.0%	Yes		7,647	4,466	58.4%	Yes	
Census Tract 261	2,097	1,998	95.3%	Yes		2,027	195	9.6%		No
Census Tract 263	6,218	5,674	91.3%	Yes		5,692	3,993	70.2%	Yes	
Census Tract 265	7,851	7,607	96.9%	Yes		7,666	4,958	64.7%	Yes	
Census Tract 269	3,703	3,696	99.8%	Yes		3,703	1,973	53.3%	Yes	
TOTAL Kingsbridge Heights	33,742	32,591	96.6%	6	-	32,880	19,551	59.5%	5	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Longwood										
Census Tract 83	6,713	6,578	98.0%	Yes		6,706	4,202	62.7%	Yes	
Census Tract 85	5,631	5,565	98.8%	Yes		5,349	3,176	59.4%	Yes	
Census Tract 87	6,127	6,011	98.1%	Yes		5,968	4,434	74.3%	Yes	
Census Tract 129.01	4,419	4,300	97.3%	Yes		4,406	2,973	67.5%	Yes	
Census Tract 131	5,084	4,980	98.0%	Yes		5,080	2,863	56.4%	Yes	
TOTAL Longwood	27,974	27,434	98.1%	5	-	27,509	17,648	64.2%	5	-
Melrose South-Mott Haven North										
Census Tract 65	5,377	5,079	94.5%	Yes		5,328	3,666	68.8%	Yes	
Census Tract 75	6,692	6,631	99.1%	Yes		6,681	3,919	58.7%	Yes	
Census Tract 77	2,022	1,960	96.9%	Yes		2,011	1,260	62.7%	Yes	
Census Tract 79	7,188	7,178	99.9%	Yes		7,163	5,056	70.6%	Yes	
Census Tract 67	6,705	6,687	99.7%	Yes		6,705	4,259	63.5%	Yes	
Census Tract 69	7,801	7,488	96.0%	Yes		7,747	4,442	57.3%	Yes	
Census Tract 71	2,795	2,743	98.1%	Yes		2,732	1,266	46.3%	Yes	
Census Tract 73	4,297	4,225	98.3%	Yes		4,276	3,167	74.1%	Yes	
TOTAL Melrose South-Mott Haven North	42,877	41,991	97.9%	8	-	42,643	27,035	63.4%	8	-
Morrisania-Melrose										
Census Tract 121.01	3,070	2,994	97.5%	Yes		2,983	1,516	50.8%	Yes	
Census Tract 125	3,860	3,807	98.6%	Yes		3,858	2,058	53.3%	Yes	
Census Tract 133	6,000	5,949	99.2%	Yes		5,966	3,057	51.2%	Yes	
Census Tract 135	3,590	3,590	100.0%	Yes		3,590	2,165	60.3%	Yes	
Census Tract 149	4,419	4,328	97.9%	Yes		4,201	2,451	58.3%	Yes	
Census Tract 151	5,309	5,235	98.6%	Yes		5,261	3,456	65.7%	Yes	
Census Tract 185	9,001	8,944	99.4%	Yes		8,922	5,552	62.2%	Yes	
Census Tract 141	5,851	5,746	98.2%	Yes		5,835	3,590	61.5%	Yes	
TOTAL Morrisania-Melrose	41,100	40,593	98.8%	8	-	40,616	23,845	58.7%	8	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Mott Haven-Port Morris										
Census Tract 23	4,302	4,301	100.0%	Yes		4,301	3,013	70.1%	Yes	
Census Tract 25	5,610	5,390	96.1%	Yes		5,577	3,445	61.8%	Yes	
Census Tract 39	6,260	5,740	91.7%	Yes		6,152	4,014	65.2%	Yes	
Census Tract 41	5,942	5,840	98.3%	Yes		5,907	4,155	70.3%	Yes	
Census Tract 51	5,737	5,737	100.0%	Yes		5,728	3,957	69.1%	Yes	
Census Tract 31	1,689	1,665	98.6%	Yes		1,689	743	44.0%	Yes	
Census Tract 35	3,907	3,890	99.6%	Yes		3,887	2,417	62.2%	Yes	
Census Tract 19	3,141	2,801	89.2%	Yes		2,983	1,560	52.3%	Yes	
Census Tract 27.01	2,608	2,608	100.0%	Yes		2,608	2,047	78.5%	Yes	
Census Tract 27.02	4,560	4,524	99.2%	Yes		4,423	3,225	72.9%	Yes	
Census Tract 33	3,277	3,185	97.2%	Yes		3,246	2,392	73.7%	Yes	
Census Tract 37	250	229	91.6%	Yes		250	123	49.2%	Yes	
Census Tract 43	5,552	5,488	98.8%	Yes		5,534	3,891	70.3%	Yes	
TOTAL Mott Haven-Port Morris	52,835	51,398	97.3%	13	-	52,285	34,982	66.9%	13	-
Mount Hope										
Census Tract 229.02	3,614	3,582	99.1%	Yes		3,603	2,328	64.6%	Yes	
Census Tract 227.02	1,607	1,607	100.0%	Yes		1,607	927	57.7%	Yes	
Census Tract 227.03	1,688	1,614	95.6%	Yes		1,688	779	46.1%	Yes	
Census Tract 229.01	5,743	5,655	98.5%	Yes		5,743	3,317	57.8%	Yes	
Census Tract 231	1,537	1,497	97.4%	Yes		1,445	1,011	70.0%	Yes	
Census Tract 233.01	3,956	3,956	100.0%	Yes		3,948	2,013	51.0%	Yes	
Census Tract 233.02	3,706	3,659	98.7%	Yes		3,661	2,173	59.4%	Yes	
Census Tract 235.01	3,184	3,163	99.3%	Yes		3,184	1,881	59.1%	Yes	
Census Tract 235.02	4,153	4,136	99.6%	Yes		4,127	2,298	55.7%	Yes	
Census Tract 241	6,621	6,316	95.4%	Yes		6,597	3,641	55.2%	Yes	
Census Tract 379	5,469	5,453	99.7%	Yes		5,354	3,613	67.5%	Yes	
Census Tract 381	7,647	7,621	99.7%	Yes		7,647	4,460	58.3%	Yes	
Census Tract 227.01	5,151	5,073	98.5%	Yes		5,073	3,036	59.8%	Yes	
TOTAL Mount Hope	54,076	53,332	98.6%	13	-	53,677	31,477	58.6%	13	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
North Riverdale-Fieldston-Riverdale										
Census Tract 335	2,048	632	30.9%		No	1,535	313	20.4%		No
Census Tract 351	3,740	1,709	45.7%		No	2,690	437	16.2%		No
Census Tract 307.01	5,726	1,622	28.3%		No	5,726	585	10.2%		No
Census Tract 319	633	313	49.4%		No	72	59	81.9%	Yes	
Census Tract 323	4,575	1,766	38.6%		No	4,498	656	14.6%		No
Census Tract 337	2,521	971	38.5%		No	2,521	391	15.5%		No
Census Tract 343	1,665	1,052	63.2%	Yes		1,469	315	21.4%		No
Census Tract 345	3,540	1,874	52.9%	Yes		3,343	899	26.9%		No
Census Tract 309	3,709	1,175	31.7%		No	2,812	312	11.1%		No
TOTAL North Riverdale-Fieldston-Riverdale	28,157	11,114	39.5%	2	7	24,666	3,967	16.1%	1	8
Norwood										
Census Tract 419	6,035	5,410	89.6%	Yes		5,993	3,431	57.3%	Yes	
Census Tract 421	5,661	5,176	91.4%	Yes		5,648	3,391	60.0%	Yes	
Census Tract 425	6,175	5,415	87.7%	Yes		6,173	3,646	59.1%	Yes	
Census Tract 423	4,313	3,705	85.9%	Yes		4,313	2,048	47.5%	Yes	
Census Tract 429.01	3,561	3,271	91.9%	Yes		3,554	2,045	57.5%	Yes	
Census Tract 429.02	4,041	3,843	95.1%	Yes		3,929	2,071	52.7%	Yes	
Census Tract 431	10,246	9,656	94.2%	Yes		9,814	5,699	58.1%	Yes	
TOTAL Norwood	40,032	36,476	91.1%	7	-	39,424	22,331	56.6%	7	-
park-cemetery-etc-Bronx										
Census Tract 24	155	90	58.1%	Yes		155	-	0.0%		No
Census Tract 163	-	-	0.0%		No	-	-	0.0%		No
Census Tract 171	-	-	0.0%		No	-	-	0.0%		No
Census Tract 435	499	483	96.8%	Yes		499	302	60.5%	Yes	
Census Tract 334	15	15	100.0%	Yes		15	5	33.3%	Yes	
Census Tract 276	24	24	100.0%	Yes		24	24	100.0%	Yes	
Census Tract 504	-	-	0.0%		No	-	-	0.0%		No
TOTAL park-cemetery-etc-Bronx	693	612	88.3%	4	3	693	331	47.8%	3	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Parkchester										
Census Tract 210.01	8,930	8,735	97.8%	Yes		8,930	2,893	32.4%	Yes	
Census Tract 210.02	7,613	7,527	98.9%	Yes		7,613	2,705	35.5%	Yes	
Census Tract 212	4,850	4,782	98.6%	Yes		4,850	1,447	29.8%	Yes	
Census Tract 216.02	5,632	5,419	96.2%	Yes		5,614	2,018	35.9%	Yes	
Census Tract 222	3,293	3,112	94.5%	Yes		3,272	1,475	45.1%	Yes	
TOTAL Parkchester	30,318	29,575	97.5%	5	-	30,279	10,538	34.8%	5	-
Pelham Bay-Country Club-City Island										
Br N Census Tract 274.01	4,693	1,426	30.4%		No	4,693	743	15.8%		No
Br N Census Tract 274.02	3,481	1,204	34.6%		No	3,277	618	18.9%		No
Br N Census Tract 266.01	3,452	2,569	74.4%	Yes		3,452	982	28.4%	Yes	
Br N Census Tract 266.02	5,084	3,313	65.2%	Yes		5,084	1,631	32.1%	Yes	
Br N Census Tract 300	6,021	4,114	68.3%	Yes		5,998	2,023	33.7%	Yes	
Br N Census Tract 516	4,531	2,152	47.5%		No	4,531	830	18.3%		No
TOTAL Pelham Bay-Country Club-City Island	27,262	14,778	54.2%	3	3	27,035	6,827	25.3%	3	3
Pelham Parkway										
Census Tract 224.01	2,498	2,298	92.0%	Yes		2,492	1,010	40.5%	Yes	
Census Tract 224.03	3,194	2,563	80.2%	Yes		3,194	1,207	37.8%	Yes	
Census Tract 224.04	4,203	3,457	82.3%	Yes		4,203	1,446	34.4%	Yes	
Census Tract 228	6,128	5,040	82.2%	Yes		6,128	2,125	34.7%	Yes	
Census Tract 246	2,011	1,156	57.5%	Yes		2,007	458	22.8%		No
Census Tract 248	3,078	1,593	51.8%	Yes		2,765	578	20.9%		No
Census Tract 250	2,591	1,321	51.0%	Yes		2,589	553	21.4%		No
Census Tract 288	3,330	1,627	48.9%		No	3,330	930	27.9%	Yes	
Census Tract 296	1,575	1,210	76.8%	Yes		1,484	363	24.5%		No
TOTAL Pelham Parkway	28,608	20,265	70.8%	8	1	28,192	8,670	30.8%	5	4
Rikers Island										
Census Tract 1	6,864	6,261	91.2%	Yes		-	-	0.0%		
TOTAL Rikers Island	6,864	6,261	91.2%	1	-	-	-	0.0%	-	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Schuylerville-Throgs Neck-Edgewater Park										
Census Tract 110	-	-	0.0%		No	-	-	0.0%		No
Census Tract 130	1,476	818	55.4%	Yes		1,476	163	11.0%		No
Census Tract 132	7,272	5,229	71.9%	Yes		7,257	779	10.7%		No
Census Tract 138	2,588	1,227	47.4%		No	2,588	689	26.6%		No
Census Tract 144	5,138	5,038	98.1%	Yes		5,055	2,998	59.3%	Yes	
Census Tract 152	2,481	1,691	68.2%	Yes		2,481	869	35.0%	Yes	
Census Tract 158	1,314	782	59.5%	Yes		1,311	347	26.5%		No
Census Tract 160	3,666	1,703	46.5%		No	3,662	794	21.7%		No
Census Tract 162	1,870	1,279	68.4%	Yes		1,675	525	31.3%	Yes	
Census Tract 164	1,046	335	32.0%		No	1,046	156	14.9%		No
Census Tract 166	2,244	1,764	78.6%	Yes		2,244	623	27.8%	Yes	
Census Tract 184	3,793	2,254	59.4%	Yes		3,793	836	22.0%		No
Census Tract 194	2,375	2,017	84.9%	Yes		2,375	1,080	45.5%	Yes	
Census Tract 264	4,868	3,254	66.8%	Yes		4,868	1,331	27.3%	Yes	
Census Tract 118	5,503	2,398	43.6%		No	4,106	731	17.8%		No
TOTAL Schuylerville-Throgs Neck-Edgewater Park	45,634	29,789	65.3%	10	5	43,937	11,921	27.1%	6	9
Soundview-Bruckner										
Census Tract 40.01	1,475	1,347	91.3%	Yes		1,475	457	31.0%	Yes	
Census Tract 44	4,401	4,107	93.3%	Yes		4,209	3,128	74.3%	Yes	
Census Tract 48	4,563	4,535	99.4%	Yes		4,534	2,391	52.7%	Yes	
Census Tract 50.01	4,604	4,562	99.1%	Yes		4,431	2,832	63.9%	Yes	
Census Tract 50.02	5,592	5,532	98.9%	Yes		5,552	3,824	68.9%	Yes	
Census Tract 52	1,956	1,956	100.0%	Yes		1,956	1,292	66.1%	Yes	
Census Tract 68	3,230	3,230	100.0%	Yes		3,230	1,601	49.6%	Yes	
Census Tract 70	4,378	4,227	96.6%	Yes		4,362	2,471	56.6%	Yes	
Census Tract 72	6,255	5,882	94.0%	Yes		6,211	3,250	52.3%	Yes	
TOTAL Soundview-Bruckner	36,454	35,378	97.0%	9	-	35,960	21,246	59.1%	9	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Soundview-Castle Hill-Clason Point-Harding Park										
Census Tract 90	3,459	3,404	98.4%	Yes		3,434	2,289	66.7%	Yes	
Census Tract 2	4,532	4,499	99.3%	Yes		4,532	1,903	42.0%	Yes	
Census Tract 4	5,516	5,129	93.0%	Yes		5,503	1,168	21.2%		No
Census Tract 16	5,825	5,612	96.3%	Yes		5,603	3,300	58.9%	Yes	
Census Tract 20	9,040	9,019	99.8%	Yes		8,984	5,951	66.2%	Yes	
Census Tract 28	5,151	5,100	99.0%	Yes		5,121	1,409	27.5%	Yes	
Census Tract 38	1,350	1,350	100.0%	Yes		1,328	572	43.1%	Yes	
Census Tract 42	7,697	7,288	94.7%	Yes		7,660	3,438	44.9%	Yes	
Census Tract 46	1,961	1,866	95.2%	Yes		1,946	1,272	65.4%	Yes	
Census Tract 74	3,634	3,555	97.8%	Yes		3,634	1,514	41.7%	Yes	
Census Tract 84	2,899	2,834	97.8%	Yes		2,878	708	24.6%		No
Census Tract 86	3,936	3,871	98.3%	Yes		3,833	2,603	67.9%	Yes	
TOTAL Soundview-Castle Hill-Clason Point-Harding Park	55,000	53,527	97.3%	12	-	54,456	26,127	48.0%	10	2
Spuyten Duyvil-Kingsbridge										
Census Tract 293.01	1,806	584	32.3%		No	1,620	130	8.0%		No
Census Tract 283	2,489	2,192	88.1%	Yes		2,487	1,586	63.8%	Yes	
Census Tract 285	3,523	1,910	54.2%	Yes		3,495	1,164	33.3%	Yes	
Census Tract 287	3,153	2,389	75.8%	Yes		3,153	1,017	32.3%	Yes	
Census Tract 289	4,807	3,992	83.0%	Yes		4,623	1,857	40.2%	Yes	
Census Tract 295	4,564	1,935	42.4%		No	4,564	430	9.4%		No
Census Tract 293.02	5,569	2,181	39.2%		No	5,435	984	18.1%		No
Census Tract 297	3,799	1,308	34.4%		No	3,552	323	9.1%		No
Census Tract 301	1,413	713	50.5%	Yes		1,043	175	16.8%		No
TOTAL Spuyten Duyvil-Kingsbridge	31,123	17,204	55.3%	5	4	29,972	7,666	25.6%	4	5

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
University Heights-Morris Heights										
Census Tract 53	4,888	4,832	98.9%	Yes		4,867	4,036	82.9%	Yes	
Census Tract 205.01	6,976	6,903	99.0%	Yes		6,955	4,669	67.1%	Yes	
Census Tract 205.02	2,160	2,124	98.3%	Yes		2,160	1,201	55.6%	Yes	
Census Tract 213.01	1,267	1,197	94.5%	Yes		1,267	699	55.2%	Yes	
Census Tract 251	7,360	7,296	99.1%	Yes		7,340	4,464	60.8%	Yes	
Census Tract 215.01	4,565	4,509	98.8%	Yes		4,396	2,438	55.5%	Yes	
Census Tract 215.02	6,532	6,513	99.7%	Yes		6,344	4,513	71.1%	Yes	
Census Tract 217	5,124	5,023	98.0%	Yes		5,078	2,860	56.3%	Yes	
Census Tract 243	5,737	5,663	98.7%	Yes		5,737	3,467	60.4%	Yes	
Census Tract 245.01	4,871	4,803	98.6%	Yes		4,871	3,572	73.3%	Yes	
Census Tract 245.02	3,677	3,649	99.2%	Yes		3,577	2,271	63.5%	Yes	
Census Tract 247	2,058	2,030	98.6%	Yes		2,058	946	46.0%	Yes	
Census Tract 249	-	-	0.0%		No	-	-	0.0%		No
Census Tract 257	1,999	1,963	98.2%	Yes		1,999	817	40.9%	Yes	
TOTAL University Heights-Morris Heights	57,214	56,505	98.8%	13	1	56,649	35,953	63.5%	13	1
Van Cortlandt Village										
Census Tract 267.01	4,185	4,068	97.2%	Yes		4,185	2,198	52.5%	Yes	
Census Tract 267.02	7,895	7,659	97.0%	Yes		7,815	5,308	67.9%	Yes	
Census Tract 273	7,778	7,332	94.3%	Yes		7,557	4,096	54.2%	Yes	
Census Tract 277	4,660	4,120	88.4%	Yes		4,660	2,324	49.9%	Yes	
Census Tract 279	7,379	6,299	85.4%	Yes		6,923	2,770	40.0%	Yes	
Census Tract 281	3,954	2,739	69.3%	Yes		3,679	934	25.4%		No
Census Tract 403.03	4,900	4,850	99.0%	Yes		4,872	2,860	58.7%	Yes	
Census Tract 403.04	3,593	3,556	99.0%	Yes		3,570	2,237	62.7%	Yes	
Census Tract 407.01	3,120	3,016	96.7%	Yes		3,120	1,580	50.6%	Yes	
Census Tract 409	3,194	2,538	79.5%	Yes		3,185	1,094	34.3%	Yes	
TOTAL Van Cortlandt Village	50,658	46,177	91.2%	10	-	49,566	25,401	51.2%	9	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Van Nest-Morris Park-Westchester Square										
Census Tract 238	2,241	1,832	81.7%	Yes		2,227	839	37.7%	Yes	
Census Tract 240	3,903	3,494	89.5%	Yes		3,878	1,781	45.9%	Yes	
Census Tract 284	554	235	42.4%		No	109	109	100.0%	Yes	
Census Tract 200	4,711	4,581	97.2%	Yes		4,700	2,842	60.5%	Yes	
Census Tract 230	2,802	2,269	81.0%	Yes		2,802	1,538	54.9%	Yes	
Census Tract 232	2,476	1,772	71.6%	Yes		2,464	986	40.0%	Yes	
Census Tract 236	1,816	1,252	68.9%	Yes		1,754	763	43.5%	Yes	
Census Tract 244	2,146	1,398	65.1%	Yes		2,146	569	26.5%		No
Census Tract 252	2,787	1,684	60.4%	Yes		2,780	939	33.8%	Yes	
Census Tract 254	1,997	805	40.3%		No	1,997	667	33.4%	Yes	
Census Tract 256	1,696	1,432	84.4%	Yes		1,625	647	39.8%	Yes	
Census Tract 286	1,085	601	55.4%	Yes		1,085	237	21.8%		No
TOTAL Van Nest-Morris Park-Westchester Square	28,214	21,355	75.7%	10	2	27,567	11,917	43.2%	10	2
West Concourse										
Census Tract 63	4,582	4,120	89.9%	Yes		4,571	2,227	48.7%	Yes	
Census Tract 195	7,060	6,918	98.0%	Yes		6,994	4,039	57.7%	Yes	
Census Tract 197	7,561	7,485	99.0%	Yes		7,527	4,615	61.3%	Yes	
Census Tract 209	4,287	4,123	96.2%	Yes		4,287	2,624	61.2%	Yes	
Census Tract 221.01	4,133	4,122	99.7%	Yes		4,122	2,544	61.7%	Yes	
Census Tract 221.02	5,411	5,356	99.0%	Yes		5,411	4,125	76.2%	Yes	
Census Tract 223	5,278	5,152	97.6%	Yes		5,143	3,205	62.3%	Yes	
TOTAL West Concourse	38,312	37,276	97.3%	7	-	38,055	23,379	61.4%	7	-

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
West Farms-Bronx River										
Census Tract 54	5,324	5,246	98.5%	Yes		5,324	3,094	58.1%	Yes	
Census Tract 56	2,279	2,224	97.6%	Yes		2,279	1,263	55.4%	Yes	
Census Tract 62	7,233	7,116	98.4%	Yes		7,233	5,581	77.2%	Yes	
Census Tract 64	3,932	3,738	95.1%	Yes		3,855	2,011	52.2%	Yes	
Census Tract 76	5,311	5,103	96.1%	Yes		5,266	3,046	57.8%	Yes	
Census Tract 216.01	4,720	4,521	95.8%	Yes		4,720	2,637	55.9%	Yes	
Census Tract 218	6,520	6,377	97.8%	Yes		6,507	3,720	57.2%	Yes	
TOTAL West Farms-Bronx River	35,319	34,325	97.2%	7	-	35,184	21,352	60.7%	7	-
Westchester-Unionport										
Census Tract 78	7,415	7,195	97.0%	Yes		7,390	3,800	51.4%	Yes	
Census Tract 92	5,848	5,590	95.6%	Yes		5,820	2,653	45.6%	Yes	
Census Tract 96	2,792	2,613	93.6%	Yes		2,590	1,205	46.5%	Yes	
Census Tract 98	4,756	4,589	96.5%	Yes		4,687	1,205	25.7%		No
Census Tract 202	2,385	2,281	95.6%	Yes		2,348	1,260	53.7%	Yes	
Census Tract 204	3,011	2,742	91.1%	Yes		3,005	1,210	40.3%	Yes	
Census Tract 206.01	2,237	2,158	96.5%	Yes		2,237	1,134	50.7%	Yes	
TOTAL Westchester-Unionport	28,444	27,168	95.5%	7	-	28,077	12,467	44.4%	6	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Williamsbridge-Olinville										
Census Tract 368	2,109	2,052	97.3%	Yes		2,000	749	37.5%	Yes	
Census Tract 370	2,416	2,378	98.4%	Yes		2,416	1,030	42.6%	Yes	
Census Tract 372	2,132	2,114	99.2%	Yes		2,130	784	36.8%	Yes	
Census Tract 374	3,861	3,787	98.1%	Yes		3,847	2,213	57.5%	Yes	
Census Tract 376	2,197	1,980	90.1%	Yes		2,168	748	34.5%	Yes	
Census Tract 378	2,900	2,870	99.0%	Yes		2,882	1,131	39.2%	Yes	
Census Tract 380	5,239	5,031	96.0%	Yes		5,191	2,952	56.9%	Yes	
Census Tract 382	3,100	3,051	98.4%	Yes		3,085	1,438	46.6%	Yes	
Census Tract 388	2,763	2,714	98.2%	Yes		2,763	930	33.7%	Yes	
Census Tract 390	2,861	2,792	97.6%	Yes		2,861	1,303	45.5%	Yes	
Census Tract 392	1,602	1,582	98.8%	Yes		1,602	432	27.0%	Yes	
Census Tract 394	5,647	5,586	98.9%	Yes		5,421	2,684	49.5%	Yes	
Census Tract 396	5,022	4,981	99.2%	Yes		5,015	2,604	51.9%	Yes	
Census Tract 398	3,842	3,831	99.7%	Yes		3,816	742	19.4%		No
Census Tract 404	3,600	3,567	99.1%	Yes		3,600	516	14.3%		No
Census Tract 406	3,547	3,545	99.9%	Yes		3,543	1,337	37.7%	Yes	
Census Tract 408	4,826	4,365	90.4%	Yes		4,811	2,438	50.7%	Yes	
Census Tract 420	4,206	4,071	96.8%	Yes		4,121	2,158	52.4%	Yes	
Census Tract 422	3,285	3,176	96.7%	Yes		3,285	964	29.3%	Yes	
Census Tract 424	2,569	2,484	96.7%	Yes		2,322	467	20.1%		No
TOTAL Williamsbridge-Olinville	67,724	65,957	97.4%	20	-	66,879	27,620	41.3%	17	3

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Woodlawn-Wakefield										
Census Tract 426	6,729	6,312	93.8%	Yes		6,627	1,770	26.7%		No
Census Tract 448	2,075	2,013	97.0%	Yes		2,067	421	20.4%		No
Census Tract 428	2,120	2,065	97.4%	Yes		2,120	566	26.7%		No
Census Tract 430	3,499	3,439	98.3%	Yes		3,499	1,298	37.1%	Yes	
Census Tract 444	4,295	4,173	97.2%	Yes		4,278	1,208	28.2%	Yes	
Census Tract 414	5,158	4,989	96.7%	Yes		5,131	1,892	36.9%	Yes	
Census Tract 418	3,876	3,777	97.4%	Yes		3,804	1,618	42.5%	Yes	
Census Tract 434	3,710	3,592	96.8%	Yes		3,710	1,395	37.6%	Yes	
Census Tract 436	2,020	1,884	93.3%	Yes		2,020	445	22.0%		No
Census Tract 442	4,019	4,007	99.7%	Yes		4,009	1,379	34.4%	Yes	
Census Tract 449.01	1,763	403	22.9%		No	1,756	283	16.1%		No
Census Tract 449.02	2,041	588	28.8%		No	2,026	603	29.8%	Yes	
Census Tract 451.01	1,455	343	23.6%		No	1,451	252	17.4%		No
Census Tract 451.02	1,955	503	25.7%		No	1,955	232	11.9%		No
TOTAL Woodlawn-Wakefield	44,715	38,088	85.2%	10	4	44,453	13,362	30.1%	7	7
TOTAL Bronx County	1,435,068	1,303,928	90.9%	308	31	1,400,341	714,262	51.0%	275	63

Table 17C-8

Environmental Justice Populations: Bergen County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Bergen County, New Jersey										
Allendale Borough										
Census Tract 10	6,765	1,156	17.1%		No	6,667	329	4.9%		No
TOTAL Allendale Borough	6,765	1,156	17.1%	-	1	6,667	329	4.9%	-	1
Alpine Borough										
Census Tract 21	1,547	733	47.4%	Yes		1,547	186	12.0%		No
TOTAL Alpine Borough	1,547	733	47.4%	1	-	1,547	186	12.0%	-	1
Bergenfield Borough										
Census Tract 33	6,601	4,551	68.9%	Yes		6,601	697	10.6%		No
Census Tract 34.01	2,802	1,123	40.1%		No	2,802	316	11.3%		No
Census Tract 34.02	3,559	1,454	40.9%		No	3,559	255	7.2%		No
Census Tract 31	5,545	3,583	64.6%	Yes		5,545	671	12.1%		No
Census Tract 32	4,978	3,656	73.4%	Yes		4,978	1,014	20.4%		No
Census Tract 35	3,888	3,194	82.2%	Yes		3,888	1,183	30.4%	Yes	
TOTAL Bergenfield Borough	27,373	17,561	64.2%	4	2	27,373	4,136	15.1%	1	5
Bogota Borough										
Census Tract 40.01	3,212	2,126	66.2%	Yes		3,203	535	16.7%		No
Census Tract 40.02	5,148	3,196	62.1%	Yes		5,148	975	18.9%		No
TOTAL Bogota Borough	8,360	5,322	63.7%	2	-	8,351	1,510	18.1%	-	2
Carlstadt Borough										
Census Tract 50	6,178	2,269	36.7%		No	6,178	1,047	16.9%		No
TOTAL Carlstadt Borough	6,178	2,269	36.7%	-	1	6,178	1,047	16.9%	-	1
Cliffside Park Borough										
Census Tract 61	6,982	3,496	50.1%	Yes		6,948	1,806	26.0%		No
Census Tract 62.01	4,335	2,119	48.9%	Yes		4,335	1,145	26.4%		No
Census Tract 62.02	5,060	2,332	46.1%	Yes		5,060	898	17.7%		No
Census Tract 63	8,749	5,736	65.6%	Yes		8,749	2,620	29.9%	Yes	
TOTAL Cliffside Park Borough	25,126	13,683	54.5%	4	-	25,092	6,469	25.8%	1	3

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Closter Borough										
Census Tract 70.02	4,619	2,140	46.3%	Yes		4,619	226	4.9%		No
Census Tract 70.01	3,946	2,091	53.0%	Yes		3,892	544	14.0%		No
TOTAL Closter Borough	8,565	4,231	49.4%	2	-	8,511	770	9.0%	-	2
Cresskill Borough										
Census Tract 80	8,699	3,318	38.1%		No	8,629	1,031	11.9%		No
TOTAL Cresskill Borough	8,699	3,318	38.1%	-	1	8,629	1,031	11.9%	-	1
Demarest Borough										
Census Tract 91	4,942	2,014	40.8%		No	4,942	365	7.4%		No
TOTAL Demarest Borough	4,942	2,014	40.8%	-	1	4,942	365	7.4%	-	1
Dumont Borough										
Census Tract 101	5,815	1,931	33.2%		No	5,815	520	8.9%		No
Census Tract 102	4,466	2,240	50.2%	Yes		4,457	538	12.1%		No
Census Tract 103	7,343	2,936	40.0%		No	7,343	961	13.1%		No
TOTAL Dumont Borough	17,624	7,107	40.3%	1	2	17,615	2,019	11.5%	-	3
East Rutherford Borough										
Census Tract 120.01	6,333	3,361	53.1%	Yes		6,333	1,832	28.9%	Yes	
Census Tract 120.02	3,251	1,303	40.1%		No	3,233	486	15.0%		No
TOTAL East Rutherford Borough	9,584	4,664	48.7%	1	1	9,566	2,318	24.2%	1	1
Edgewater Borough										
Census Tract 130.01	6,924	4,561	65.9%	Yes		6,924	822	11.9%		No
Census Tract 130.02	5,479	2,780	50.7%	Yes		5,474	734	13.4%		No
TOTAL Edgewater Borough	12,403	7,341	59.2%	2	-	12,398	1,556	12.6%	-	2
Elmwood Park Borough										
Census Tract 111	4,410	2,725	61.8%	Yes		4,386	968	22.1%		No
Census Tract 112	4,830	2,656	55.0%	Yes		4,830	1,263	26.1%		No
Census Tract 113	4,325	1,704	39.4%		No	4,316	823	19.1%		No
Census Tract 114	6,494	2,088	32.2%		No	6,494	1,002	15.4%		No
TOTAL Elmwood Park Borough	20,059	9,173	45.7%	2	2	20,026	4,056	20.3%	-	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Emerson Borough										
Census Tract 140	7,596	2,014	26.5%		No	7,384	502	6.8%		No
TOTAL Emerson Borough	7,596	2,014	26.5%	-	1	7,384	502	6.8%	-	1
Englewood										
Census Tract 151	2,566	636	24.8%		No	2,559	200	7.8%		No
Census Tract 152	6,753	5,578	82.6%	Yes		6,645	1,555	23.4%		No
Census Tract 153	5,659	5,386	95.2%	Yes		5,640	1,670	29.6%	Yes	
Census Tract 154	7,180	4,852	67.6%	Yes		7,180	1,900	26.5%		No
Census Tract 155	6,195	2,681	43.3%		No	6,133	710	11.6%		No
TOTAL Englewood	28,353	19,133	67.5%	3	2	28,157	6,035	21.4%	1	4
Englewood Cliffs Borough										
Census Tract 160	5,371	3,017	56.2%	Yes		5,371	570	10.6%		No
TOTAL Englewood Cliffs Borough	5,371	3,017	56.2%	1	-	5,371	570	10.6%	-	1
Fair Lawn Borough										
Census Tract 171	6,993	1,089	15.6%		No	6,993	622	8.9%		No
Census Tract 172	6,102	2,262	37.1%		No	6,102	843	13.8%		No
Census Tract 173	6,129	1,533	25.0%		No	6,129	603	9.8%		No
Census Tract 174	5,398	1,467	27.2%		No	5,249	378	7.2%		No
Census Tract 175	8,395	3,374	40.2%		No	8,395	1,168	13.9%		No
TOTAL Fair Lawn Borough	33,017	9,725	29.5%	-	5	32,868	3,614	11.0%	-	5
Fairview Borough										
Census Tract 182	6,565	4,483	68.3%	Yes		6,565	2,503	38.1%	Yes	
Census Tract 181	7,693	5,735	74.5%	Yes		7,692	1,700	22.1%		No
TOTAL Fairview Borough	14,258	10,218	71.7%	2	-	14,257	4,203	29.5%	1	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Fort Lee Borough										
Census Tract 193.04	2,652	1,552	58.5%	Yes		2,652	511	19.3%		No
Census Tract 193.05	6,534	2,986	45.7%	Yes		6,534	732	11.2%		No
Census Tract 193.06	2,033	931	45.8%	Yes		2,033	192	9.4%		No
Census Tract 191.02	3,150	2,036	64.6%	Yes		3,150	656	20.8%		No
Census Tract 191.03	4,519	3,162	70.0%	Yes		4,519	872	19.3%		No
Census Tract 191.04	4,053	2,443	60.3%	Yes		4,053	992	24.5%		No
Census Tract 192.02	2,245	1,562	69.6%	Yes		2,245	527	23.5%		No
Census Tract 192.03	3,159	1,692	53.6%	Yes		3,159	787	24.9%		No
Census Tract 192.04	3,527	2,217	62.9%	Yes		3,527	1,206	34.2%	Yes	
Census Tract 193.03	5,558	3,599	64.8%	Yes		5,558	1,028	18.5%		No
TOTAL Fort Lee Borough	37,430	22,180	59.3%	10	-	37,430	7,503	20.0%	1	9
Franklin Lakes Borough										
Census Tract 201	4,189	903	21.6%		No	4,189	111	2.6%		No
Census Tract 202	6,757	1,150	17.0%		No	6,757	325	4.8%		No
TOTAL Franklin Lakes Borough	10,946	2,053	18.8%	-	2	10,946	436	4.0%	-	2
Garfield										
Census Tract 211	6,589	1,918	29.1%		No	6,544	2,105	32.2%	Yes	
Census Tract 212	5,743	2,326	40.5%		No	5,743	1,606	28.0%	Yes	
Census Tract 213	4,600	1,748	38.0%		No	4,600	1,424	31.0%	Yes	
Census Tract 214	4,932	2,293	46.5%	Yes		4,879	1,598	32.8%	Yes	
Census Tract 215	5,300	3,458	65.2%	Yes		5,295	2,239	42.3%	Yes	
Census Tract 216	4,481	3,052	68.1%	Yes		4,481	1,737	38.8%	Yes	
TOTAL Garfield	31,645	14,795	46.8%	3	3	31,542	10,709	34.0%	6	-
Glen Rock Borough										
Census Tract 221	3,877	785	20.2%		No	3,877	312	8.0%		No
Census Tract 222	7,903	2,126	26.9%		No	7,903	322	4.1%		No
TOTAL Glen Rock Borough	11,780	2,911	24.7%	-	2	11,780	634	5.4%	-	2

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Hackensack										
Census Tract 231	3,453	2,699	78.2%	Yes		3,453	1,476	42.7%	Yes	
Census Tract 232	6,489	4,792	73.8%	Yes		6,489	1,304	20.1%		No
Census Tract 233.01	2,750	1,514	55.1%	Yes		2,750	464	16.9%		No
Census Tract 233.02	5,267	2,969	56.4%	Yes		5,267	883	16.8%		No
Census Tract 234.01	3,796	2,921	76.9%	Yes		3,796	1,101	29.0%	Yes	
Census Tract 234.02	5,899	4,598	77.9%	Yes		5,760	1,526	26.5%		No
Census Tract 235.01	3,710	3,278	88.4%	Yes		3,496	1,094	31.3%	Yes	
Census Tract 235.02	5,222	4,292	82.2%	Yes		5,222	1,834	35.1%	Yes	
Census Tract 236.01	2,868	2,042	71.2%	Yes		2,868	774	27.0%	Yes	
Census Tract 236.02	4,885	4,206	86.1%	Yes		4,270	1,930	45.2%	Yes	
TOTAL Hackensack	44,339	33,311	75.1%	10	-	43,371	12,386	28.6%	6	4
Harrington Park Borough										
Census Tract 242	4,753	1,367	28.8%		No	4,753	579	12.2%		No
TOTAL Harrington Park Borough	4,753	1,367	28.8%	-	1	4,753	579	12.2%	-	1
Hasbrouck Heights Borough										
Census Tract 251	6,590	3,277	49.7%	Yes		6,551	1,704	26.0%		No
Census Tract 252	5,492	1,410	25.7%		No	5,492	531	9.7%		No
TOTAL Hasbrouck Heights Borough	12,082	4,687	38.8%	1	1	12,043	2,235	18.6%	-	2
Haworth Borough										
Census Tract 92	3,418	769	22.5%		No	3,418	264	7.7%		No
TOTAL Haworth Borough	3,418	769	22.5%	-	1	3,418	264	7.7%	-	1
Hillsdale Borough										
Census Tract 261	4,647	886	19.1%			4,634	465	10.0%		No
Census Tract 262	5,699	1,265	22.2%		No	5,654	598	10.6%		No
TOTAL Hillsdale Borough	10,346	2,151	20.8%	-	1	10,288	1,063	10.3%	-	2
Ho-Ho-Kus Borough										
Census Tract 270	4,094	783	19.1%		No	4,094	72	1.8%		No
TOTAL Ho-Ho-Kus Borough	4,094	783	19.1%	-	1	4,094	72	1.8%	-	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Leonia Borough										
Census Tract 280.01	5,249	3,357	64.0%	Yes		5,239	913	17.4%		No
Census Tract 280.02	3,837	2,272	59.2%	Yes		3,813	553	14.5%		No
TOTAL Leonia Borough	9,086	5,629	62.0%	2	-	9,052	1,466	16.2%	-	2
Little Ferry Borough										
Census Tract 292	6,367	3,142	49.3%	Yes		6,367	1,877	29.5%	Yes	
Census Tract 291	4,415	2,883	65.3%	Yes		4,415	1,323	30.0%	Yes	
TOTAL Little Ferry Borough	10,782	6,025	55.9%	2	-	10,782	3,200	29.7%	2	-
Lodi Borough										
Census Tract 302	7,424	3,988	53.7%	Yes		7,395	2,375	32.1%	Yes	
Census Tract 303	4,443	2,520	56.7%	Yes		4,365	1,578	36.2%	Yes	
Census Tract 301	5,686	3,148	55.4%	Yes		5,686	1,239	21.8%		No
Census Tract 304	6,877	3,943	57.3%	Yes		6,654	1,361	20.5%		No
TOTAL Lodi Borough	24,430	13,599	55.7%	4	-	24,100	6,553	27.2%	2	2
Lyndhurst Township										
Census Tract 311	6,413	3,240	50.5%	Yes		6,413	1,331	20.8%		No
Census Tract 312	4,862	1,312	27.0%		No	4,845	1,266	26.1%		No
Census Tract 313	5,582	1,835	32.9%		No	5,582	1,100	19.7%		No
Census Tract 314	5,441	1,056	19.4%		No	5,441	736	13.5%		No
TOTAL Lyndhurst Township	22,298	7,443	33.4%	1	3	22,281	4,433	19.9%	-	4
Mahwah Township										
Census Tract 321.02	6,026	1,316	21.8%		No	5,995	529	8.8%		No
Census Tract 322.01	5,750	1,330	23.1%		No	5,700	196	3.4%		No
Census Tract 322.02	5,098	1,344	26.4%		No	5,096	985	19.3%		No
Census Tract 321.03	5,154	1,435	27.8%		No	5,154	908	17.6%		No
Census Tract 321.04	4,247	1,851	43.6%	Yes		2,084	511	24.5%		No
TOTAL Mahwah Township	26,275	7,276	27.7%	1	4	24,029	3,129	13.0%	-	5

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Maywood Borough										
Census Tract 331	3,879	1,725	44.5%	Yes		3,859	330	8.6%		No
Census Tract 332	2,217	726	32.7%		No	2,217	367	16.6%		No
Census Tract 333	3,565	1,894	53.1%	Yes		3,565	871	24.4%		No
TOTAL Maywood Borough	9,661	4,345	45.0%	2	1	9,641	1,568	16.3%	-	3
Midland Park Borough										
Census Tract 340	7,244	1,249	17.2%		No	7,228	689	9.5%		
TOTAL Midland Park Borough	7,244	1,249	17.2%	-	1	7,228	689	9.5%	-	-
Montvale Borough										
Census Tract 351	8,489	2,268	26.7%		No	8,489	655	7.7%		
TOTAL Montvale Borough	8,489	2,268	26.7%	-	1	8,489	655	7.7%	-	-
Moonachie Borough										
Census Tract 362	2,716	1,416	52.1%	Yes		2,716	793	29.2%	Yes	Yes
TOTAL Moonachie Borough	2,716	1,416	52.1%	1	-	2,716	793	29.2%	1	-
New Milford Borough										
Census Tract 371	5,453	2,249	41.2%		No	5,443	887	16.3%		No
Census Tract 372.01	3,879	1,294	33.4%		No	3,879	437	11.3%		No
Census Tract 372.02	7,213	3,359	46.6%	Yes		7,015	1,096	15.6%		No
TOTAL New Milford Borough	16,545	6,902	41.7%	1	2	16,337	2,420	14.8%	-	3
North Arlington Borough										
Census Tract 381	5,554	2,232	40.2%		No	5,554	1,478	26.6%		No
Census Tract 382	4,248	2,227	52.4%	Yes		4,248	1,133	26.7%		No
Census Tract 383	5,875	1,888	32.1%		No	5,875	533	9.1%		No
TOTAL North Arlington Borough	15,677	6,347	40.5%	1	2	15,677	3,144	20.1%	-	3
Northvale Borough										
Census Tract 22	5,487	2,219	40.4%		No	5,135	676	13.2%		No
TOTAL Northvale Borough	5,487	2,219	40.4%	-	1	5,135	676	13.2%	-	1
Norwood Borough										
Census Tract 23	5,812	2,157	37.1%		No	5,632	675	12.0%		No
TOTAL Norwood Borough	5,812	2,157	37.1%	-	1	5,632	675	12.0%	-	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Oakland Borough										
Census Tract 391	4,134	620	15.0%		No	4,123	433	10.5%		No
Census Tract 392	5,973	908	15.2%		No	5,973	465	7.8%		No
Census Tract 393	2,865	304	10.6%		No	2,651	209	7.9%		No
TOTAL Oakland Borough	12,972	1,832	14.1%	-	3	12,747	1,107	8.7%	-	3
Old Tappan Borough										
Census Tract 241	5,914	1,848	31.2%		No	5,888	411	7.0%		No
TOTAL Old Tappan Borough	5,914	1,848	31.2%	-	1	5,888	411	7.0%	-	1
Oradell Borough										
Census Tract 400.01	3,543	932	26.3%		No	3,391	206	6.1%		No
Census Tract 400.02	4,598	1,443	31.4%		No	4,598	447	9.7%		No
TOTAL Oradell Borough	8,141	2,375	29.2%	-	2	7,989	653	8.2%	-	2
Palisades Park Borough										
Census Tract 413.01	5,805	4,826	83.1%	Yes		5,765	1,974	34.2%	Yes	
Census Tract 411	5,915	4,973	84.1%	Yes		5,915	2,161	36.5%	Yes	
Census Tract 412	4,798	3,829	79.8%	Yes		4,798	1,107	23.1%		No
Census Tract 413.02	4,086	3,252	79.6%	Yes		4,086	986	24.1%		No
TOTAL Palisades Park Borough	20,604	16,880	81.9%	4	-	20,564	6,228	30.3%	2	2
Paramus Borough										
Census Tract 421	7,413	3,372	45.5%	Yes		7,337	540	7.4%		No
Census Tract 424	4,455	1,853	41.6%		No	4,455	450	10.1%		No
Census Tract 425	4,505	2,540	56.4%	Yes		4,481	525	11.7%		No
Census Tract 423.01	4,471	1,582	35.4%		No	4,349	394	9.1%		No
Census Tract 423.02	5,659	2,158	38.1%		No	4,287	170	4.0%		No
TOTAL Paramus Borough	26,503	11,505	43.4%	-	3	24,909	2,079	8.3%	-	5
Park Ridge Borough										
Census Tract 430.01	4,160	955	23.0%		No	4,151	409	9.9%		No
Census Tract 430.02	4,606	932	20.2%		No	4,351	381	8.8%		No
TOTAL Park Ridge Borough	8,766	1,887	21.5%	-	2	8,502	790	9.3%	-	2

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Ramsey Borough										
Census Tract 442.01	3,790	451	11.9%		No	3,790	153	4.0%		No
Census Tract 441	6,015	541	9.0%		No	6,015	314	5.2%		No
Census Tract 442.02	5,135	1,152	22.4%		No	5,135	691	13.5%		No
TOTAL Ramsey Borough	14,940	2,144	14.4%	-	3	14,940	1,158	7.8%	-	3
Ridgefield Borough										
Census Tract 452	2,790	1,927	69.1%	Yes		2,774	841	30.3%	Yes	
Census Tract 451	8,437	4,913	58.2%	Yes		8,437	2,228	26.4%		No
Census Tract 461	4,386	2,661	60.7%	Yes		4,386	752	17.1%		No
Census Tract 462	3,990	2,265	56.8%	Yes		3,990	659	16.5%		No
Census Tract 463	4,546	3,048	67.0%	Yes		4,546	948	20.9%		No
TOTAL Ridgefield Park Village	24,149	14,814	61.3%	-	-	24,133	5,428	22.5%	-	4
Ridgewood Village										
Census Tract 471	6,028	2,184	36.2%		No	5,941	517	8.7%		No
Census Tract 472	4,530	921	20.3%		No	4,530	293	6.5%		No
Census Tract 473	3,092	604	19.5%		No	3,092	100	3.2%		No
Census Tract 474	4,553	1,247	27.4%		No	4,536	423	9.3%		No
Census Tract 475	6,976	2,006	28.8%		No	6,886	488	7.1%		No
TOTAL Ridgewood Village	25,179	6,962	27.7%	-	5	24,985	1,821	7.3%	-	5
River Edge Borough										
Census Tract 481	3,832	1,927	50.3%	Yes		3,832	643	16.8%		No
Census Tract 482	7,668	2,446	31.9%		No	7,668	204	2.7%		No
TOTAL River Edge Borough	11,500	4,373	38.0%	1	1	11,500	847	7.4%	-	2
River Vale Township										
Census Tract 490.01	4,498	544	12.1%		No	4,498	148	3.3%		No
Census Tract 490.02	5,497	1,151	20.9%		No	5,441	361	6.6%		No
TOTAL River Vale Township	9,995	1,695	17.0%	-	2	9,939	509	5.1%	-	2
Rochelle Park Township										
Census Tract 500	5,597	2,421	43.3%		No	5,413	854	15.8%		No
TOTAL Rochelle Park Township	5,597	2,421	43.3%	-	1	5,413	854	15.8%	-	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Rutherford Borough										
Census Tract 511	6,245	2,413	38.6%		No	6,013	826	13.7%		No
Census Tract 512	2,547	762	29.9%		No	2,537	235	9.3%		No
Census Tract 513	4,575	2,409	52.7%	Yes		4,575	822	18.0%		No
Census Tract 514	5,031	2,208	43.9%	Yes		5,031	515	10.2%		No
TOTAL Rutherford Borough	18,398	7,792	42.4%	2	2	18,156	2,398	13.2%	-	4
Saddle Brook Township										
Census Tract 521	7,554	1,845	24.4%		No	7,554	1,181	15.6%		No
Census Tract 522	6,291	2,416	38.4%		No	6,291	780	12.4%		No
TOTAL Saddle Brook Township	13,845	4,261	30.8%	-	2	13,845	1,961	14.2%	-	2
Saddle River Borough										
Census Tract 531	3,192	1,176	36.8%		No	3,183	163	5.1%		No
TOTAL Saddle River Borough	3,192	1,176	36.8%	-	1	3,183	163	5.1%	-	1
Teaneck Township										
Census Tract 542	4,789	3,555	74.2%	Yes		4,689	1,533	32.7%	Yes	
Census Tract 546	8,481	5,202	61.3%	Yes		8,416	897	10.7%		No
Census Tract 543	6,672	527	7.9%		No	6,672	469	7.0%		No
Census Tract 544	7,434	3,952	53.2%	Yes		6,669	1,194	17.9%		No
Census Tract 545	4,831	1,923	39.8%		No	4,802	352	7.3%		No
Census Tract 541	8,251	6,866	83.2%	Yes		8,090	1,208	14.9%		No
TOTAL Teaneck Township	40,458	22,025	54.4%	4	2	39,338	5,653	14.4%	1	5
Tenafly Borough										
Census Tract 551	6,725	2,093	31.1%		No	6,663	415	6.2%		No
Census Tract 552	7,907	3,849	48.7%	Yes		7,907	891	11.3%		No
TOTAL Tenafly Borough	14,632	5,942	40.6%	1	1	14,570	1,306	9.0%	-	2
Teterboro Borough										
Census Tract 361	2,677	1,521	56.8%	Yes		2,677	712	26.6%		No
TOTAL Teterboro Borough	2,677	1,521	56.8%	1	-	2,677	712	26.6%	-	1
Upper Saddle River Borough										
Census Tract 532	8,227	2,482	30.2%		No	8,212	475	5.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
TOTAL Upper Saddle River Borough	8,227	2,482	30.2%	-	1	8,212	475	5.8%	-	1
Waldwick Borough										
Census Tract 561	5,096	1,001	19.6%		No	5,096	271	5.3%		No
Census Tract 562	4,890	956	19.6%		No	4,890	660	13.5%		No
TOTAL Waldwick Borough	9,986	1,957	19.6%	-	2	9,986	931	9.3%	-	2
Wallington Borough										
Census Tract 571.01	4,365	1,473	33.7%		No	4,351	902	20.7%		No
Census Tract 571.02	3,572	760	21.3%		No	3,549	639	18.0%		No
Census Tract 572	3,603	779	21.6%		No	3,603	970	26.9%	Yes	
TOTAL Wallington Borough	11,540	3,012	26.1%	-	3	11,503	2,511	21.8%	1	2
Washington Township										
Census Tract 581	3,739	789	21.1%		No	3,730	197	5.3%		No
Census Tract 582	5,498	770	14.0%		No	5,498	210	3.8%		No
TOTAL Washington Township	9,237	1,559	16.9%	-	2	9,228	407	4.4%	-	2
Westwood Borough										
Census Tract 591	5,143	1,768	34.4%		No	5,092	519	10.2%		No
Census Tract 592	5,972	1,918	32.1%		No	5,972	662	11.1%		No
TOTAL Westwood Borough	11,115	3,686	33.2%	-	2	11,064	1,181	10.7%	-	2
Woodcliff Lake Borough										
Census Tract 352	5,832	665	11.4%		No	5,743	314	5.5%		No
TOTAL Woodcliff Lake Borough	5,832	665	11.4%	-	1	5,743	314	5.5%	-	1
Wood-Ridge Borough										
Census Tract 600	8,819	2,918	33.1%		No	8,819	1,059	12.0%		No
TOTAL Wood-Ridge Borough	8,819	2,918	33.1%	-	1	8,819	1,059	12.0%	-	1
Wyckoff Township										
Census Tract 614	5,131	664	12.9%		No	5,131	134	2.6%		No
Census Tract 611	4,728	380	8.0%		No	4,719	285	6.0%		No
Census Tract 612	3,241	182	5.6%		No	3,241	116	3.6%		No
Census Tract 613	3,917	630	16.1%		No	3,426	318	9.3%		No
TOTAL Wyckoff Township	17,017	1,856	10.9%	-	4	16,517	853	5.2%	-	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
TOTAL Bergen County	930,390	404,149	43.4%	84	94	920,046	147,807	16.1%	28	149

Table 17C-9

Environmental Justice Populations: Essex County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Essex County, New Jersey										
Belleville Township										
Census Tract 140	3,817	1,966	51.5%	Yes		3,817	345	9.0%		No
Census Tract 147	6,392	4,563	71.4%	Yes		6,372	1,886	29.6%	Yes	
Census Tract 143	5,755	4,202	73.0%	Yes		5,755	1,665	28.9%	Yes	
Census Tract 144	3,488	2,699	77.4%	Yes		3,488	1,234	35.4%	Yes	
Census Tract 141	3,511	2,138	60.9%	Yes		3,511	732	20.8%		No
Census Tract 142	4,094	2,944	71.9%	Yes		4,094	221	5.4%		No
Census Tract 145	4,221	3,349	79.3%	Yes		4,221	1,598	37.9%	Yes	
Census Tract 146	4,903	3,815	77.8%	Yes		4,903	1,563	31.9%	Yes	
TOTAL Belleville Township	36,181	25,676	71.0%	8	-	36,161	9,244	25.6%	5	3
Bloomfield Township										
Census Tract 148	3,344	1,277	38.2%		No	3,300	388	11.8%		No
Census Tract 149	4,652	1,600	34.4%		No	4,644	306	6.6%		No
Census Tract 150	3,311	1,115	33.7%		No	3,295	779	23.6%		No
Census Tract 151	4,542	2,460	54.2%	Yes		4,495	542	12.1%		No
Census Tract 152	4,370	2,669	61.1%	Yes		4,370	1,262	28.9%	Yes	
Census Tract 153	2,569	1,694	65.9%	Yes		2,569	332	12.9%		No
Census Tract 154	5,195	2,791	53.7%	Yes		4,735	1,300	27.5%	Yes	
Census Tract 155	4,417	2,630	59.5%	Yes		4,417	417	9.4%		No
Census Tract 156	4,440	2,947	66.4%	Yes		4,440	803	18.1%		No
Census Tract 157	2,596	2,025	78.0%	Yes		2,539	1,071	42.2%	Yes	
Census Tract 158	4,164	2,943	70.7%	Yes		4,164	1,053	25.3%		No
Census Tract 159	5,660	4,852	85.7%	Yes		5,628	2,042	36.3%	Yes	
TOTAL Bloomfield Township	49,260	29,003	58.9%	9	3	48,596	10,295	21.2%	4	8
Caldwell Borough										
Census Tract 217.01	3,758	703	18.7%		No	3,758	620	16.5%		No
Census Tract 217.02	4,211	983	23.3%		No	3,699	502	13.6%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
TOTAL Caldwell Borough	7,969	1,686	21.2%	-	2	7,457	1,122	15.0%	-	2
Cedar Grove Township										
Census Tract 213	5,931	1,364	23.0%		No	5,472	318	5.8%		No
Census Tract 214	6,585	1,037	15.7%		No	6,225	498	8.0%		No
TOTAL Cedar Grove Township	12,516	2,401	19.2%	-	2	11,697	816	7.0%	-	2
City of Orange Township										
Census Tract 181	2,057	1,982	96.4%	Yes		2,057	864	42.0%	Yes	
Census Tract 182	4,176	4,096	98.1%	Yes		4,176	1,108	26.5%		No
Census Tract 183	4,307	4,281	99.4%	Yes		4,307	2,346	54.5%	Yes	
Census Tract 184	1,925	1,888	98.1%	Yes		1,917	779	40.6%	Yes	
Census Tract 186	4,555	4,291	94.2%	Yes		4,342	2,277	52.4%	Yes	
Census Tract 187	5,228	5,162	98.7%	Yes		5,221	3,020	57.8%	Yes	
Census Tract 188	4,464	4,229	94.7%	Yes		4,290	1,257	29.3%	Yes	
Census Tract 189	3,772	3,657	97.0%	Yes		3,752	1,685	44.9%	Yes	
TOTAL City of Orange Township	30,484	29,586	97.1%	8	-	30,062	13,336	44.4%	7	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
East Orange										
Census Tract 99	2,348	2,328	99.1%	Yes		2,348	948	40.4%	Yes	
Census Tract 100	2,983	2,887	96.8%	Yes		2,941	525	17.9%		No
Census Tract 101	2,668	2,626	98.4%	Yes		2,650	882	33.3%	Yes	
Census Tract 102	4,594	4,513	98.2%	Yes		4,375	1,628	37.2%	Yes	
Census Tract 103	3,171	3,077	97.0%	Yes		2,920	1,137	38.9%	Yes	
Census Tract 104	4,740	4,666	98.4%	Yes		4,644	2,079	44.8%	Yes	
Census Tract 105	4,763	4,696	98.6%	Yes		4,696	2,155	45.9%	Yes	
Census Tract 106	4,331	4,230	97.7%	Yes		4,286	2,603	60.7%	Yes	
Census Tract 107	3,561	3,513	98.7%	Yes		3,377	1,910	56.6%	Yes	
Census Tract 108	2,978	2,978	100.0%	Yes		2,932	1,544	52.7%	Yes	
Census Tract 109	2,265	2,239	98.9%	Yes		2,241	857	38.2%	Yes	
Census Tract 111	3,921	3,863	98.5%	Yes		3,908	1,991	50.9%	Yes	
Census Tract 112	2,952	2,894	98.0%	Yes		2,952	1,638	55.5%	Yes	
Census Tract 113	4,124	4,090	99.2%	Yes		4,117	1,485	36.1%	Yes	
Census Tract 114	4,369	4,111	94.1%	Yes		4,244	1,040	24.5%		No
Census Tract 115	2,230	2,213	99.2%	Yes		2,218	792	35.7%	Yes	
Census Tract 116	3,213	3,173	98.8%	Yes		3,193	1,758	55.1%	Yes	
Census Tract 117	2,813	2,629	93.5%	Yes		2,682	1,078	40.2%	Yes	
Census Tract 118	2,350	2,314	98.5%	Yes		2,332	753	32.3%	Yes	
TOTAL East Orange	64,374	63,040	97.9%	19	-	63,056	26,803	42.5%	17	2
Essex Fells Borough										
Census Tract 209.01	2,110	275	13.0%		No	2,110	62	2.9%		No
TOTAL Essex Fells Borough	2,110	275	13.0%	-	1	2,110	62	2.9%	-	1
Fairfield Township										
Census Tract 216.01	7,486	1,156	15.4%		No	7,486	562	7.5%		No
TOTAL Fairfield Township	7,486	1,156	15.4%	-	1	7,486	562	7.5%	-	1
Glen Ridge Borough										
Census Tract 160	7,584	1,792	23.6%		No	7,584	519	6.8%		No
TOTAL Glen Ridge Borough	7,584	1,792	23.6%	-	1	7,584	519	6.8%	-	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Irvington Township										
Census Tract 119	1,629	1,570	96.4%	Yes		1,629	710	43.6%	Yes	
Census Tract 120	6,126	6,029	98.4%	Yes		5,944	2,386	40.1%	Yes	
Census Tract 121	3,991	3,934	98.6%	Yes		3,991	1,609	40.3%	Yes	
Census Tract 122	5,326	5,069	95.2%	Yes		5,326	2,395	45.0%	Yes	
Census Tract 123	4,598	4,493	97.7%	Yes		4,576	1,750	38.2%	Yes	
Census Tract 124	4,424	4,244	95.9%	Yes		4,424	2,392	54.1%	Yes	
Census Tract 125	3,928	3,894	99.1%	Yes		3,928	1,610	41.0%	Yes	
Census Tract 126	3,064	3,027	98.8%	Yes		3,043	1,473	48.4%	Yes	
Census Tract 127	4,080	3,942	96.6%	Yes		4,080	1,673	41.0%	Yes	
Census Tract 128	3,464	3,341	96.4%	Yes		3,464	1,272	36.7%	Yes	
Census Tract 129	3,652	3,652	100.0%	Yes		3,623	2,070	57.1%	Yes	
Census Tract 130	1,884	1,853	98.4%	Yes		1,884	423	22.5%		No
Census Tract 131	2,185	2,180	99.8%	Yes		2,185	1,213	55.5%	Yes	
Census Tract 132	2,156	2,126	98.6%	Yes		2,156	1,291	59.9%	Yes	
Census Tract 133	3,572	3,558	99.6%	Yes		3,572	1,995	55.9%	Yes	
TOTAL Irvington Township	54,079	52,912	97.8%	15	-	53,825	24,262	45.1%	14	1
Livingston Township										
Census Tract 204	5,298	1,533	28.9%		No	5,298	184	3.5%		No
Census Tract 205	7,643	2,793	36.5%		No	7,643	183	2.4%		No
Census Tract 206	5,088	1,720	33.8%		No	4,988	455	9.1%		No
Census Tract 207	4,473	1,799	40.2%		No	4,473	552	12.3%		No
Census Tract 208	7,344	2,245	30.6%		No	7,088	454	6.4%		No
TOTAL Livingston Township	29,846	10,090	33.8%	-	5	29,490	1,828	6.2%	-	5

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Maplewood Township										
Census Tract 195	3,810	913	24.0%		No	3,810	130	3.4%		No
Census Tract 196	6,139	4,144	67.5%	Yes		6,119	1,484	24.3%		No
Census Tract 197	6,586	5,431	82.5%	Yes		6,542	793	12.1%		No
Census Tract 198	2,743	1,091	39.8%		No	2,743	242	8.8%		No
Census Tract 199	2,561	549	21.4%		No	2,561	236	9.2%		No
Census Tract 194	2,945	610	20.7%		No	2,945	162	5.5%		No
TOTAL Maplewood Township	24,784	12,738	51.4%	2	4	24,720	3,047	12.3%	-	6
Millburn Township										
Census Tract 202	4,851	1,746	36.0%		No	4,851	253	5.2%		No
Census Tract 203	4,580	2,143	46.8%		No	4,554	798	17.5%		No
Census Tract 200	5,760	1,826	31.7%		No	5,760	356	6.2%		No
Census Tract 201	4,957	1,794	36.2%		No	4,957	276	5.6%		No
TOTAL Millburn Township	20,148	7,509	37.3%	-	4	20,122	1,683	8.4%	-	4
Montclair Township										
Census Tract 163	3,584	541	15.1%		No	3,584	255	7.1%		No
Census Tract 164	3,628	699	19.3%		No	3,560	322	9.0%		No
Census Tract 165	3,740	1,214	32.5%		No	3,703	464	12.5%		No
Census Tract 166	3,141	1,282	40.8%		No	3,141	642	20.4%		No
Census Tract 167	2,704	1,707	63.1%	Yes		2,704	681	25.2%		No
Census Tract 168	3,591	1,802	50.2%	Yes		3,582	613	17.1%		No
Census Tract 169	2,920	809	27.7%		No	2,920	101	3.5%		No
Census Tract 170	2,688	1,420	52.8%	Yes		2,631	265	10.1%		No
Census Tract 171	2,299	2,074	90.2%	Yes		2,285	1,059	46.3%	Yes	
Census Tract 172	3,310	2,371	71.6%	Yes		3,302	649	19.7%		No
Census Tract 161	3,557	876	24.6%		No	3,449	353	10.2%		No
Census Tract 162	3,265	437	13.4%		No	3,265	128	3.9%		No
TOTAL Montclair Township	38,427	15,232	39.6%	5	7	38,126	5,532	14.5%	1	11
Newark										
Census Tract 22.01	8,704	8,081	92.8%	Yes		8,704	4,405	50.6%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 22.02	3,385	3,375	99.7%	Yes		3,382	1,647	48.7%	Yes	
Census Tract 23	4,917	4,879	99.2%	Yes		4,917	1,619	32.9%	Yes	
Census Tract 28	1,898	1,898	100.0%	Yes		1,856	1,062	57.2%	Yes	
Census Tract 31	2,092	2,089	99.9%	Yes		2,066	1,364	66.0%	Yes	
Census Tract 35	2,270	2,258	99.5%	Yes		2,270	997	43.9%	Yes	
Census Tract 37	1,874	1,806	96.4%	Yes		1,874	943	50.3%	Yes	
Census Tract 38	2,218	2,204	99.4%	Yes		2,218	1,127	50.8%	Yes	
Census Tract 39	1,296	1,296	100.0%	Yes		1,296	896	69.1%	Yes	
Census Tract 41	3,332	3,332	100.0%	Yes		3,250	2,310	71.1%	Yes	
Census Tract 42	2,214	2,180	98.5%	Yes		2,212	1,318	59.6%	Yes	
Census Tract 43	2,679	2,679	100.0%	Yes		2,679	1,578	58.9%	Yes	
Census Tract 44	1,313	1,298	98.9%	Yes		1,313	745	56.7%	Yes	
Census Tract 45	2,981	2,959	99.3%	Yes		2,981	1,378	46.2%	Yes	
Census Tract 46	2,977	2,953	99.2%	Yes		2,977	1,584	53.2%	Yes	
Census Tract 47	4,981	4,907	98.5%	Yes		4,970	1,515	30.5%	Yes	
Census Tract 48.01	2,279	2,263	99.3%	Yes		2,279	1,186	52.0%	Yes	
Census Tract 48.02	2,670	2,565	96.1%	Yes		2,627	2,017	76.8%	Yes	
Census Tract 49	3,276	3,252	99.3%	Yes		3,276	1,692	51.6%	Yes	
Census Tract 50	2,774	2,737	98.7%	Yes		2,774	1,697	61.2%	Yes	
Census Tract 51	2,171	2,158	99.4%	Yes		2,171	1,101	50.7%	Yes	
Census Tract 52	1,307	1,296	99.2%	Yes		1,306	803	61.5%	Yes	
Census Tract 53	2,290	2,224	97.1%	Yes		2,273	1,189	52.3%	Yes	
Census Tract 54	4,178	4,155	99.4%	Yes		4,140	3,161	76.4%	Yes	
Census Tract 57	2,225	1,838	82.6%	Yes		2,225	988	44.4%	Yes	
Census Tract 62	1,696	1,654	97.5%	Yes		1,696	1,019	60.1%	Yes	
Census Tract 64	1,154	1,079	93.5%	Yes		1,154	278	24.1%		No
Census Tract 66	1,481	1,454	98.2%	Yes		1,481	751	50.7%	Yes	
Census Tract 67	3,955	3,819	96.6%	Yes		3,804	2,199	57.8%	Yes	
Census Tract 68	5,811	4,411	75.9%	Yes		5,811	2,284	39.3%	Yes	
Census Tract 80	2,356	1,793	76.1%	Yes		2,356	1,336	56.7%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 81	3,714	3,552	95.6%	Yes		3,714	2,215	59.6%	Yes	
Census Tract 82	2,289	2,130	93.1%	Yes		1,964	1,510	76.9%	Yes	
Census Tract 227	2,648	2,515	95.0%	Yes		2,648	1,508	56.9%	Yes	
Census Tract 228	1,964	1,878	95.6%	Yes		1,964	1,399	71.2%	Yes	
Census Tract 230	3,179	3,160	99.4%	Yes		3,037	2,300	75.7%	Yes	
Census Tract 231	2,396	2,365	98.7%	Yes		2,388	1,150	48.2%	Yes	
Census Tract 232	3,413	3,386	99.2%	Yes		3,382	2,212	65.4%	Yes	
Census Tract 71	4,428	2,212	50.0%		No	4,360	1,697	38.9%	Yes	
Census Tract 72	3,849	2,236	58.1%	Yes		3,849	1,470	38.2%	Yes	
Census Tract 73	5,438	2,626	48.3%		No	5,425	2,150	39.6%	Yes	
Census Tract 74	5,388	3,739	69.4%	Yes		2,818	1,221	43.3%	Yes	
Census Tract 75.01	4,665	3,408	73.1%	Yes		4,653	3,515	75.5%	Yes	
Census Tract 75.02	2,573	2,168	84.3%	Yes		2,564	1,447	56.4%	Yes	
Census Tract 76	3,508	2,489	71.0%	Yes		3,489	1,701	48.8%	Yes	
Census Tract 69	4,908	3,302	67.3%	Yes		4,908	2,175	44.3%	Yes	
Census Tract 70	3,765	2,067	54.9%	Yes		3,765	1,821	48.4%	Yes	
Census Tract 77	2,701	1,786	66.1%	Yes		2,701	1,286	47.6%	Yes	
Census Tract 78	3,600	2,307	64.1%	Yes		3,600	1,920	53.3%	Yes	
Census Tract 79	3,659	2,312	63.2%	Yes		3,643	1,637	44.9%	Yes	
Census Tract 9801	2,594	2,126	82.0%	Yes		-	-	0.0%		No
Census Tract 9802	1,391	1,223	87.9%	Yes		-	-	0.0%		No
Census Tract 2	3,378	3,161	93.6%	Yes		3,361	1,956	58.2%	Yes	
Census Tract 3	3,893	3,642	93.6%	Yes		3,852	2,556	66.4%	Yes	
Census Tract 4	2,104	1,908	90.7%	Yes		2,094	1,031	49.2%	Yes	
Census Tract 5	1,970	1,832	93.0%	Yes		1,970	1,084	55.0%	Yes	
Census Tract 6	3,721	3,255	87.5%	Yes		3,721	1,505	40.4%	Yes	
Census Tract 7	6,165	5,919	96.0%	Yes		6,165	3,258	52.8%	Yes	
Census Tract 8	4,672	4,525	96.9%	Yes		4,671	2,723	58.3%	Yes	
Census Tract 9	3,392	3,353	98.9%	Yes		3,392	2,323	68.5%	Yes	
Census Tract 10	3,503	3,248	92.7%	Yes		2,760	1,680	60.9%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 11	3,154	2,254	71.5%	Yes		1,645	762	46.3%	Yes	
Census Tract 13	1,629	1,393	85.5%	Yes		1,574	686	43.6%	Yes	
Census Tract 14	2,816	2,765	98.2%	Yes		2,816	1,520	54.0%	Yes	
Census Tract 15	1,942	1,884	97.0%	Yes		1,913	1,554	81.2%	Yes	
Census Tract 16	1,832	1,732	94.5%	Yes		1,815	1,225	67.5%	Yes	
Census Tract 17	2,156	2,156	100.0%	Yes		2,156	1,360	63.1%	Yes	
Census Tract 18	2,188	2,188	100.0%	Yes		2,188	1,326	60.6%	Yes	
Census Tract 19	1,955	1,914	97.9%	Yes		1,955	1,346	68.8%	Yes	
Census Tract 20	4,231	4,231	100.0%	Yes		4,231	1,691	40.0%	Yes	
Census Tract 21	3,185	3,101	97.4%	Yes		3,185	1,226	38.5%	Yes	
Census Tract 24	2,979	2,822	94.7%	Yes		2,979	1,273	42.7%	Yes	
Census Tract 25	4,590	4,520	98.5%	Yes		4,559	2,302	50.5%	Yes	
Census Tract 26	1,564	1,564	100.0%	Yes		1,483	834	56.2%	Yes	
Census Tract 87	3,564	3,391	95.1%	Yes		3,543	1,684	47.5%	Yes	
Census Tract 88	1,852	1,845	99.6%	Yes		1,832	1,002	54.7%	Yes	
Census Tract 89	2,035	1,988	97.7%	Yes		2,035	1,106	54.3%	Yes	
Census Tract 90	1,787	1,672	93.6%	Yes		1,704	868	50.9%	Yes	
Census Tract 91	3,116	2,884	92.6%	Yes		3,116	1,836	58.9%	Yes	
Census Tract 94	5,973	5,084	85.1%	Yes		5,973	2,798	46.8%	Yes	
Census Tract 229	4,255	3,590	84.4%	Yes		3,195	1,637	51.2%	Yes	
Census Tract 1	6,296	5,681	90.2%	Yes		6,296	2,677	42.5%	Yes	
Census Tract 92	3,062	2,767	90.4%	Yes		2,574	1,497	58.2%	Yes	
Census Tract 93	5,017	4,859	96.9%	Yes		5,017	2,995	59.7%	Yes	
Census Tract 95	5,514	4,820	87.4%	Yes		5,514	2,708	49.1%	Yes	
Census Tract 96	5,443	5,162	94.8%	Yes		5,443	3,415	62.7%	Yes	
Census Tract 97	5,297	5,234	98.8%	Yes		5,297	2,725	51.4%	Yes	
TOTAL Newark	281,054	250,223	89.0%	85	2	269,234	142,692	53.0%	84	3

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
North Caldwell Borough										
Census Tract 216.02	6,615	1,048	15.8%		No	6,615	285	4.3%		No
TOTAL North Caldwell Borough	6,615	1,048	15.8%	-	1	6,615	285	4.3%	-	1
Nutley Township										
Census Tract 139	4,922	1,694	34.4%		No	4,922	811	16.5%		No
Census Tract 135	4,296	1,092	25.4%		No	4,296	249	5.8%		No
Census Tract 136	6,541	2,963	45.3%		No	6,541	1,054	16.1%		No
Census Tract 134	3,776	880	23.3%		No	3,776	280	7.4%		No
Census Tract 137	4,550	1,533	33.7%		No	4,518	1,531	33.9%	Yes	
Census Tract 138	4,393	1,348	30.7%		No	4,393	258	5.9%		No
TOTAL Nutley Township	28,478	9,510	33.4%	-	6	28,446	4,183	14.7%	1	5
Roseland Borough										
Census Tract 209.02	5,834	922	15.8%		No	5,834	557	9.5%		No
TOTAL Roseland Borough	5,834	922	15.8%	-	1	5,834	557	9.5%	-	1
South Orange Village Township										
Census Tract 190	4,292	1,430	33.3%		No	4,292	340	7.9%		No
Census Tract 193	3,447	1,280	37.1%		No	3,372	723	21.4%		No
Census Tract 191	4,140	2,205	53.3%	Yes		4,042	194	4.8%		No
Census Tract 192	4,642	1,717	37.0%		No	2,799	861	30.8%	Yes	
TOTAL South Orange Village Township	16,521	6,632	40.1%	1	3	14,505	2,118	14.6%	1	3
Verona Township										
Census Tract 210	5,417	679	12.5%		No	5,417	572	10.6%		No
Census Tract 211	4,464	792	17.7%		No	4,464	254	5.7%		No
Census Tract 212	3,556	593	16.7%		No	3,556	387	10.9%		No
TOTAL Verona Township	13,437	2,064	15.4%	-	3	13,437	1,213	9.0%	-	3
West Caldwell Township										
Census Tract 218.01	2,704	345	12.8%		No	2,704	135	5.0%		No
Census Tract 218.02	3,506	584	16.7%		No	3,287	214	6.5%		No
Census Tract 218.03	4,648	579	12.5%		No	4,648	561	12.1%		No
TOTAL West Caldwell Township	10,858	1,508	13.9%	-	3	10,639	910	8.6%	-	3

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
West Orange Township										
Census Tract 173.01	5,369	1,947	36.3%		No	5,207	129	2.5%		No
Census Tract 173.02	7,790	3,813	48.9%		No	7,204	1,016	14.1%		No
Census Tract 174	5,554	2,928	52.7%	Yes		5,554	242	4.4%		No
Census Tract 179	3,705	1,899	51.3%	Yes		3,705	301	8.1%		No
Census Tract 180	6,178	3,236	52.4%	Yes		6,062	338	5.6%		No
Census Tract 175	6,060	3,265	53.9%	Yes		6,060	676	11.2%		No
Census Tract 176	4,880	3,710	76.0%	Yes		4,880	1,203	24.7%		No
Census Tract 177	4,811	4,130	85.8%	Yes		4,811	2,289	47.6%	Yes	
Census Tract 178	3,012	2,508	83.3%	Yes		2,982	1,010	33.9%	Yes	
TOTAL West Orange Township	47,359	27,436	57.9%	7	2	46,465	7,204	15.5%	2	7
TOTAL Essex County	795,404	552,439	69.5%	159	1	775,667	258,273	33.3%	136	6

Table 17C-10

Environmental Justice Populations: Hudson County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Hudson County, New Jersey										
Bayonne										
Census Tract 101	7,133	4,528	63.5%	Yes		7,133	3,001	42.1%	Yes	
Census Tract 102	2,908	1,397	48.0%		No	2,908	598	20.6%		No
Census Tract 103	3,147	1,989	63.2%	Yes		3,147	1,685	53.5%	Yes	
Census Tract 104	4,184	2,354	56.3%	Yes		4,173	998	23.9%		No
Census Tract 105	5,503	2,917	53.0%	Yes		5,484	867	15.8%		No
Census Tract 106	7,383	4,175	56.5%	Yes		7,383	2,726	36.9%	Yes	
Census Tract 107	3,723	2,077	55.8%	Yes		3,723	1,743	46.8%	Yes	
Census Tract 108	3,471	2,245	64.7%	Yes		3,471	915	26.4%		No
Census Tract 109	2,174	1,113	51.2%	Yes		2,174	985	45.3%	Yes	
Census Tract 110	2,069	1,445	69.8%	Yes		2,069	695	33.6%	Yes	
Census Tract 111	4,487	2,806	62.5%	Yes		4,475	2,032	45.4%	Yes	
Census Tract 112	6,269	3,194	50.9%	Yes		6,247	745	11.9%		No
Census Tract 113	2,593	1,568	60.5%	Yes		2,593	1,021	39.4%	Yes	
Census Tract 114	3,583	1,884	52.6%	Yes		3,583	798	22.3%		No
Census Tract 115	2,601	844	32.4%		No	2,601	476	18.3%		No
Census Tract 116	3,863	1,699	44.0%		No	3,863	1,723	44.6%	Yes	
TOTAL Bayonne	65,091	36,235	55.7%	13	3	65,027	21,008	32.3%	9	7
East Newark Borough										
Census Tract 134	2,644	2,116	80.0%	Yes		2,618	1,029	39.3%	Yes	
TOTAL East Newark Borough	2,644	2,116	80.0%	1	-	2,618	1,029	39.3%	1	-
Guttenberg										
Census Tract 150.02	6,325	5,067	80.1%	Yes		6,218	2,359	37.9%	Yes	
Census Tract 151	3,017	2,542	84.3%	Yes		3,017	887	29.4%	Yes	
Census Tract 150.01	1,975	1,115	56.5%	Yes		1,975	235	11.9%		No
TOTAL Guttenberg	11,317	8,724	77.1%	3	-	11,210	3,481	31.1%	2	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Harrison										
Census Tract 135	5,274	3,765	71.4%	Yes		5,274	2,130	40.4%	Yes	
Census Tract 139	3,781	2,455	64.9%	Yes		3,781	1,168	30.9%	Yes	
Census Tract 136	2,220	1,725	77.7%	Yes		2,220	1,070	48.2%	Yes	
Census Tract 137	2,737	2,230	81.5%	Yes		2,737	1,266	46.3%	Yes	
Census Tract 138	3,201	2,379	74.3%	Yes		3,201	626	19.6%		No
TOTAL Harrison	17,213	12,554	72.9%	5	-	17,213	6,260	36.4%	4	1
Hoboken										
Census Tract 191	3,369	972	28.9%		No	3,369	323	9.6%		No
Census Tract 192	3,972	1,011	25.5%		No	3,972	127	3.2%		No
Census Tract 193	2,876	840	29.2%		No	2,876	371	12.9%		No
Census Tract 194	2,775	711	25.6%		No	2,775	611	22.0%		No
Census Tract 183.01	2,637	661	25.1%		No	2,637	58	2.2%		No
Census Tract 183.02	4,418	1,298	29.4%		No	4,418	122	2.8%		No
Census Tract 184	5,681	1,712	30.1%		No	5,657	871	15.4%		No
Census Tract 185	6,923	2,087	30.1%		No	6,889	1,143	16.6%		No
Census Tract 186	2,487	603	24.2%		No	2,487	229	9.2%		No
Census Tract 187.01	2,614	737	28.2%		No	1,327	267	20.1%		No
Census Tract 187.02	4,056	1,155	28.5%		No	4,056	645	15.9%		No
Census Tract 188	3,147	875	27.8%		No	3,147	443	14.1%		No
Census Tract 189	3,550	863	24.3%		No	3,550	460	13.0%		No
Census Tract 190	4,688	2,770	59.1%	Yes		4,514	2,355	52.2%	Yes	
TOTAL Hoboken	53,193	16,295	30.6%	1	13	51,674	8,025	15.5%	1	13

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Jersey City										
Census Tract 40	5,411	4,968	91.8%	Yes		5,411	1,145	21.2%		No
Census Tract 48	3,868	3,163	81.8%	Yes		3,868	1,342	34.7%	Yes	
Census Tract 54	7,302	6,515	89.2%	Yes		7,289	1,741	23.9%		No
Census Tract 56	4,371	4,067	93.0%	Yes		4,332	1,687	38.9%	Yes	
Census Tract 59	7,590	6,292	82.9%	Yes		7,386	1,531	20.7%		No
Census Tract 60	4,069	4,019	98.8%	Yes		4,069	2,120	52.1%	Yes	
Census Tract 61	7,249	5,630	77.7%	Yes		7,232	2,547	35.2%	Yes	
Census Tract 62	3,852	3,636	94.4%	Yes		3,797	1,597	42.1%	Yes	
Census Tract 63	4,576	4,287	93.7%	Yes		4,500	2,149	47.8%	Yes	
Census Tract 58.02	1,642	851	51.8%	Yes		1,603	142	8.9%		No
Census Tract 12.01	2,147	1,932	90.0%	Yes		2,147	752	35.0%	Yes	
Census Tract 12.02	1,377	1,207	87.7%	Yes		1,362	565	41.5%	Yes	
Census Tract 13	2,898	2,169	74.8%	Yes		2,723	783	28.8%	Yes	
Census Tract 14	4,058	3,228	79.5%	Yes		3,851	1,527	39.7%	Yes	
Census Tract 17.01	4,533	3,811	84.1%	Yes		4,533	2,169	47.8%	Yes	
Census Tract 18	3,874	3,129	80.8%	Yes		3,874	2,238	57.8%	Yes	
Census Tract 19	1,722	1,475	85.7%	Yes		1,722	607	35.2%	Yes	
Census Tract 20	3,990	3,195	80.1%	Yes		3,967	1,602	40.4%	Yes	
Census Tract 22	1,737	724	41.7%		No	1,737	288	16.6%		No
Census Tract 23	2,461	1,404	57.1%	Yes		2,461	284	11.5%		No
Census Tract 24	2,562	1,017	39.7%		No	2,562	162	6.3%		No
Census Tract 27	5,503	4,572	83.1%	Yes		5,475	2,126	38.8%	Yes	
Census Tract 28	5,502	3,452	62.7%	Yes		5,166	2,331	45.1%	Yes	
Census Tract 29	3,744	2,470	66.0%	Yes		3,432	1,374	40.0%	Yes	
Census Tract 30	2,631	1,985	75.4%	Yes		2,604	1,146	44.0%	Yes	
Census Tract 31	5,705	4,306	75.5%	Yes		5,508	1,955	35.5%	Yes	
Census Tract 35	2,107	1,203	57.1%	Yes		2,107	469	22.3%		No
Census Tract 41.01	6,242	5,000	80.1%	Yes		6,242	1,990	31.9%	Yes	
Census Tract 41.02	3,211	2,812	87.6%	Yes		3,211	1,367	42.6%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 42	5,455	5,027	92.2%	Yes		5,455	2,592	47.5%	Yes	
Census Tract 43	2,405	1,968	81.8%	Yes		2,384	783	32.8%	Yes	
Census Tract 44	2,532	2,475	97.7%	Yes		2,508	1,650	65.8%	Yes	
Census Tract 45	4,486	4,129	92.0%	Yes		4,458	2,281	51.2%	Yes	
Census Tract 46	2,770	2,519	90.9%	Yes		2,770	1,588	57.3%	Yes	
Census Tract 47	2,487	1,708	68.7%	Yes		2,456	967	39.4%	Yes	
Census Tract 49	3,961	3,670	92.7%	Yes		3,961	1,202	30.3%	Yes	
Census Tract 52	4,570	3,868	84.6%	Yes		4,360	2,287	52.5%	Yes	
Census Tract 53	3,412	3,274	96.0%	Yes		3,412	1,365	40.0%	Yes	
Census Tract 55	2,941	2,729	92.8%	Yes		2,898	1,741	60.1%	Yes	
Census Tract 58.01	5,437	5,251	96.6%	Yes		5,424	2,925	53.9%	Yes	
Census Tract 64	2,837	1,427	50.3%	Yes		2,819	391	13.9%		No
Census Tract 65	2,102	1,392	66.2%	Yes		2,102	603	28.7%	Yes	
Census Tract 66	1,377	1,210	87.9%	Yes		1,377	376	27.3%	Yes	
Census Tract 67	3,155	2,858	90.6%	Yes		3,155	1,878	59.5%	Yes	
Census Tract 68	3,854	3,679	95.5%	Yes		3,854	1,698	44.1%	Yes	
Census Tract 70	4,772	3,366	70.5%	Yes		4,763	967	20.3%		No
Census Tract 71	2,883	2,130	73.9%	Yes		2,751	755	27.4%	Yes	
Census Tract 72	2,445	1,360	55.6%	Yes		2,177	202	9.3%		No
Census Tract 73	2,940	1,581	53.8%	Yes		2,940	212	7.2%		No
Census Tract 74	5,118	2,420	47.3%		No	5,118	200	3.9%		No
Census Tract 75	6,264	3,923	62.6%	Yes		6,264	886	14.1%		No
Census Tract 76	8,444	5,440	64.4%	Yes		8,444	617	7.3%		No
Census Tract 77	9,134	7,298	79.9%	Yes		9,134	1,792	19.6%		No
Census Tract 78	2,245	1,358	60.5%	Yes		2,245	977	43.5%	Yes	
Census Tract 9801	-	-	0.0%		No	-	-	0.0%		No
Census Tract 1	6,029	4,810	79.8%	Yes		5,950	2,100	35.3%	Yes	
Census Tract 2	5,207	4,363	83.8%	Yes		5,207	2,546	48.9%	Yes	
Census Tract 3	4,132	3,150	76.2%	Yes		4,126	1,591	38.6%	Yes	
Census Tract 4	3,669	3,044	83.0%	Yes		3,608	1,209	33.5%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 5	4,016	3,194	79.5%	Yes		3,966	1,477	37.2%	Yes	
Census Tract 6	5,272	3,350	63.5%	Yes		5,272	1,533	29.1%	Yes	
Census Tract 7	3,032	2,164	71.4%	Yes		3,032	895	29.5%	Yes	
Census Tract 8	3,508	2,177	62.1%	Yes		3,508	1,009	28.8%	Yes	
Census Tract 9.02	6,007	4,555	75.8%	Yes		6,007	1,951	32.5%	Yes	
Census Tract 10	2,060	1,623	78.8%	Yes		2,060	614	29.8%	Yes	
Census Tract 11	4,980	3,465	69.6%	Yes		4,980	1,333	26.8%		No
Census Tract 69	68	26	38.2%		No	68	26	38.2%	Yes	
TOTAL Jersey City	261,940	204,500	78.1%	62	5	259,184	86,955	33.5%	49	18
Kearny										
Census Tract 123	2,454	1,673	68.2%	Yes		2,454	748	30.5%	Yes	
Census Tract 124	2,796	1,099	39.3%		No	2,775	232	8.4%		No
Census Tract 125	3,815	1,983	52.0%	Yes		3,770	714	18.9%		No
Census Tract 126	3,681	2,048	55.6%	Yes		3,681	1,022	27.8%	Yes	
Census Tract 127	6,350	3,844	60.5%	Yes		4,777	984	20.6%		No
Census Tract 128	4,805	3,375	70.2%	Yes		4,805	1,733	36.1%	Yes	
Census Tract 129	3,824	2,719	71.1%	Yes		3,705	1,333	36.0%	Yes	
Census Tract 130	4,038	3,448	85.4%	Yes		4,038	1,350	33.4%	Yes	
Census Tract 131	2,318	1,407	60.7%	Yes		2,318	900	38.8%	Yes	
Census Tract 132	4,279	2,969	69.4%	Yes		4,267	1,939	45.4%	Yes	
Census Tract 133	3,052	1,937	63.5%	Yes		2,946	658	22.3%		No
TOTAL Kearny	41,412	26,502	64.0%	10	1	39,536	11,613	29.4%	7	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
North Bergen Township										
Census Tract 147	5,749	4,821	83.9%	Yes		5,749	2,053	35.7%	Yes	
Census Tract 148	6,104	4,609	75.5%	Yes		6,048	1,906	31.5%	Yes	
Census Tract 149	3,331	2,883	86.6%	Yes		3,327	911	27.4%	Yes	
Census Tract 140	5,032	4,093	81.3%	Yes		5,026	1,571	31.3%	Yes	
Census Tract 142	5,994	5,382	89.8%	Yes		5,994	1,848	30.8%	Yes	
Census Tract 143	4,980	4,095	82.2%	Yes		4,980	1,233	24.8%		No
Census Tract 144	7,752	6,269	80.9%	Yes		7,745	1,520	19.6%		No
Census Tract 145.01	6,230	5,395	86.6%	Yes		6,230	2,569	41.2%	Yes	
Census Tract 145.02	3,329	2,667	80.1%	Yes		3,329	2,359	70.9%	Yes	
Census Tract 146	3,820	2,922	76.5%	Yes		3,820	1,049	27.5%	Yes	
Census Tract 141.01	4,202	2,530	60.2%	Yes		3,641	610	16.8%		No
Census Tract 141.02	5,096	3,791	74.4%	Yes		5,096	622	12.2%		No
TOTAL North Bergen Township	61,619	49,457	80.3%	12	-	60,985	18,251	29.9%	8	4
Secaucus										
Census Tract 199	5,474	2,479	45.3%		No	5,474	1,020	18.6%		No
Census Tract 200	4,959	2,332	47.0%		No	4,442	860	19.4%		No
Census Tract 201	2,583	2,063	79.9%	Yes		2,583	502	19.4%		No
Census Tract 198	7,109	4,052	57.0%	Yes		7,066	785	11.1%		No
TOTAL Secaucus	20,125	10,926	54.3%	2	2	19,565	3,167	16.2%	-	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Union City										
Census Tract 161	3,960	3,298	83.3%	Yes		3,960	2,155	54.4%	Yes	
Census Tract 162	4,286	3,598	83.9%	Yes		4,286	2,249	52.5%	Yes	
Census Tract 163	4,517	3,883	86.0%	Yes		4,508	1,793	39.8%	Yes	
Census Tract 164	3,566	3,039	85.2%	Yes		3,566	1,457	40.9%	Yes	
Census Tract 165	4,989	4,231	84.8%	Yes		4,858	1,695	34.9%	Yes	
Census Tract 166	4,043	3,301	81.6%	Yes		3,983	2,033	51.0%	Yes	
Census Tract 167	1,590	1,272	80.0%	Yes		1,590	786	49.4%	Yes	
Census Tract 168	3,687	3,052	82.8%	Yes		3,662	1,705	46.6%	Yes	
Census Tract 169	2,992	2,270	75.9%	Yes		2,975	1,801	60.5%	Yes	
Census Tract 170	5,200	4,194	80.7%	Yes		4,976	2,778	55.8%	Yes	
Census Tract 171	5,017	4,363	87.0%	Yes		5,005	2,161	43.2%	Yes	
Census Tract 172	3,297	2,719	82.5%	Yes		3,286	1,500	45.6%	Yes	
Census Tract 173	2,520	1,749	69.4%	Yes		2,520	816	32.4%	Yes	
Census Tract 174	2,489	2,152	86.5%	Yes		2,489	1,251	50.3%	Yes	
Census Tract 175	4,520	4,088	90.4%	Yes		4,508	2,413	53.5%	Yes	
Census Tract 176	3,381	2,919	86.3%	Yes		3,354	1,807	53.9%	Yes	
Census Tract 177	1,758	1,386	78.8%	Yes		1,758	1,007	57.3%	Yes	
Census Tract 178	6,414	5,305	82.7%	Yes		6,414	1,920	29.9%	Yes	
TOTAL Union City	68,226	56,819	83.3%	18	-	67,698	31,327	46.3%	18	-
Weehawken Township										
Census Tract 179	3,526	1,580	44.8%		No	3,526	213	6.0%		No
Census Tract 180	3,942	2,377	60.3%	Yes		3,901	1,289	33.0%	Yes	
Census Tract 181	2,708	1,780	65.7%	Yes		2,708	764	28.2%	Yes	
Census Tract 182	4,428	1,974	44.6%		No	4,404	730	16.6%		No
TOTAL Weehawken Township	14,604	7,711	52.8%	2	2	14,539	2,996	20.6%	2	2

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
West New York										
Census Tract 152.01	2,939	1,662	56.5%	Yes		2,939	278	9.5%		No
Census Tract 152.02	6,325	5,292	83.7%	Yes		6,233	2,466	39.6%	Yes	
Census Tract 153	4,010	3,572	89.1%	Yes		4,010	1,606	40.0%	Yes	
Census Tract 156	4,572	4,152	90.8%	Yes		4,521	2,308	51.1%	Yes	
Census Tract 157	4,209	4,133	98.2%	Yes		4,208	2,126	50.5%	Yes	
Census Tract 158.01	2,982	1,630	54.7%	Yes		2,982	556	18.6%		No
Census Tract 155	4,946	4,454	90.1%	Yes		4,928	2,051	41.6%	Yes	
Census Tract 158.02	6,649	6,149	92.5%	Yes		6,633	3,528	53.2%	Yes	
Census Tract 159	6,054	5,340	88.2%	Yes		6,045	3,235	53.5%	Yes	
Census Tract 160	3,416	3,022	88.5%	Yes		3,416	1,351	39.5%	Yes	
Census Tract 324	6,560	5,921	90.3%	Yes		6,417	3,291	51.3%	Yes	
TOTAL West New York	52,662	45,327	86.1%	11	-	52,332	22,796	43.6%	9	2
TOTAL Hudson County	670,046	477,166	71.2%	140	26	661,581	216,908	32.8%	110	56

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Elizabeth										
Census Tract 302	3,170	3,105	97.9%	Yes		3,153	1,820	57.7%	Yes	
Census Tract 304	5,644	5,396	95.6%	Yes		5,644	3,448	61.1%	Yes	
Census Tract 305	5,083	4,671	91.9%	Yes		5,041	2,146	42.6%	Yes	
Census Tract 306	3,533	3,051	86.4%	Yes		3,533	1,562	44.2%	Yes	
Census Tract 307.01	1,874	1,410	75.2%	Yes		1,850	465	25.1%		No
Census Tract 307.02	7,851	7,186	91.5%	Yes		7,823	3,788	48.4%	Yes	
Census Tract 308.02	3,205	2,757	86.0%	Yes		3,019	1,091	36.1%	Yes	
Census Tract 309	6,193	5,539	89.4%	Yes		6,165	3,123	50.7%	Yes	
Census Tract 310	3,588	3,500	97.5%	Yes		3,588	1,890	52.7%	Yes	
Census Tract 311	5,899	5,422	91.9%	Yes		5,899	3,517	59.6%	Yes	
Census Tract 312	6,418	5,823	90.7%	Yes		6,195	3,346	54.0%	Yes	
Census Tract 313	7,031	5,936	84.4%	Yes		7,031	3,302	47.0%	Yes	
Census Tract 314	5,470	5,242	95.8%	Yes		5,452	2,750	50.4%	Yes	
Census Tract 315	5,465	3,962	72.5%	Yes		5,465	1,703	31.2%	Yes	
Census Tract 316.01	3,787	3,481	91.9%	Yes		3,787	1,990	52.5%	Yes	
Census Tract 316.02	5,260	4,420	84.0%	Yes		5,255	2,268	43.2%	Yes	
Census Tract 317	5,639	5,225	92.7%	Yes		5,626	2,640	46.9%	Yes	
Census Tract 318.01	5,255	4,733	90.1%	Yes		5,255	2,692	51.2%	Yes	
Census Tract 318.02	3,316	3,091	93.2%	Yes		3,230	1,492	46.2%	Yes	
Census Tract 319.03	6,629	5,984	90.3%	Yes		6,405	3,158	49.3%	Yes	
Census Tract 319.04	2,822	2,633	93.3%	Yes		2,822	1,452	51.5%	Yes	
Census Tract 320.01	7,741	7,019	90.7%	Yes		7,692	2,785	36.2%	Yes	
Census Tract 320.02	3,849	3,151	81.9%	Yes		3,638	1,080	29.7%	Yes	
Census Tract 321	6,977	4,330	62.1%	Yes		6,977	1,189	17.0%		No
Census Tract 399	1,747	1,550	88.7%	Yes		1,255	885	70.5%	Yes	
Census Tract 398	4,887	4,044	82.8%	Yes		4,694	2,966	63.2%	Yes	
TOTAL Elizabeth	128,333	112,661	87.8%	26	-	126,494	58,548	46.3%	24	2
Fanwood Borough										
Census Tract 387	7,660	1,647	21.5%		No	7,513	709	9.4%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
TOTAL Fanwood Borough	7,660	1,647	21.5%	-	1	7,513	709	9.4%	-	1
Garwood Borough										
Census Tract 369	4,338	916	21.1%		No	4,311	276	6.4%		No
TOTAL Garwood Borough	4,338	916	21.1%	-	1	4,311	276	6.4%	-	1
Hillside Township										
Census Tract 322	5,844	5,737	98.2%	Yes		5,793	1,331	23.0%		No
Census Tract 323	2,636	2,382	90.4%	Yes		2,624	428	16.3%		No
Census Tract 324	7,240	5,500	76.0%	Yes		7,196	1,821	25.3%		No
Census Tract 325	6,208	4,105	66.1%	Yes		6,208	1,239	20.0%		No
TOTAL Hillside Township	21,928	17,724	80.8%	4	-	21,821	4,819	22.1%	-	4
Kenilworth Borough										
Census Tract 336	8,161	3,307	40.5%		No	8,161	1,590	19.5%		No
TOTAL Kenilworth Borough	8,161	3,307	40.5%	-	1	8,161	1,590	19.5%	-	1
Linden										
Census Tract 349	6,064	3,387	55.9%	Yes		6,064	1,499	24.7%		No
Census Tract 350	3,087	1,966	63.7%	Yes		3,087	507	16.4%		No
Census Tract 347	4,029	3,016	74.9%	Yes		4,014	780	19.4%		No
Census Tract 348	4,801	2,264	47.2%		No	4,801	612	12.7%		No
Census Tract 351	4,169	3,195	76.6%	Yes		4,160	1,670	40.1%	Yes	
Census Tract 353	5,729	3,896	68.0%	Yes		5,530	1,332	24.1%		No
Census Tract 354	2,808	1,452	51.7%	Yes		2,736	634	23.2%		No
Census Tract 345	4,430	3,429	77.4%	Yes		4,430	1,328	30.0%	Yes	
Census Tract 346	4,524	4,318	95.4%	Yes		4,524	1,447	32.0%	Yes	
Census Tract 352	2,581	1,969	76.3%	Yes		2,581	519	20.1%		No
TOTAL Linden	42,222	28,892	68.4%	9	1	41,927	10,328	24.6%	3	7
Mountainside Borough										
Census Tract 383	6,826	1,332	19.5%		No	6,616	267	4.0%		No
TOTAL Mountainside Borough	6,826	1,332	19.5%	-	1	6,616	267	4.0%	-	1
New Providence Borough										
Census Tract 381.01	4,144	987	23.8%		No	4,139	107	2.6%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 381.02	8,905	2,554	28.7%		No	8,814	691	7.8%		No
TOTAL New Providence Borough	13,049	3,541	27.1%	-	2	12,953	798	6.2%	-	2
Plainfield										
Census Tract 393	6,378	6,270	98.3%	Yes		6,301	4,058	64.4%	Yes	
Census Tract 394	4,714	4,621	98.0%	Yes		4,689	2,192	46.7%	Yes	
Census Tract 395	5,748	5,592	97.3%	Yes		5,727	2,500	43.7%	Yes	
Census Tract 396	4,645	4,198	90.4%	Yes		4,631	2,400	51.8%	Yes	
Census Tract 389	5,893	5,527	93.8%	Yes		5,717	2,573	45.0%	Yes	
Census Tract 390	3,885	3,513	90.4%	Yes		3,774	1,532	40.6%	Yes	
Census Tract 391	3,163	1,923	60.8%	Yes		3,163	383	12.1%		No
Census Tract 392	5,726	5,023	87.7%	Yes		5,726	2,349	41.0%	Yes	
Census Tract 397	5,434	4,701	86.5%	Yes		5,186	1,763	34.0%	Yes	
Census Tract 388	4,776	4,505	94.3%	Yes		4,652	1,952	42.0%	Yes	
TOTAL Plainfield	50,362	45,873	91.1%	10	-	49,566	21,702	43.8%	9	1
Rahway										
Census Tract 355	7,085	4,605	65.0%	Yes		7,085	1,491	21.0%		No
Census Tract 356	3,692	1,275	34.5%		No	3,692	375	10.2%		No
Census Tract 357	5,698	3,375	59.2%	Yes		5,698	850	14.9%		No
Census Tract 358	3,861	3,166	82.0%	Yes		3,829	1,476	38.5%	Yes	
Census Tract 359	3,950	2,837	71.8%	Yes		3,950	820	20.8%		No
Census Tract 360	5,257	4,397	83.6%	Yes		5,143	851	16.5%		No
TOTAL Rahway	29,543	19,655	66.5%	5	1	29,397	5,863	19.9%	1	5
Roselle Borough										
Census Tract 340	6,076	5,158	84.9%	Yes		6,076	2,420	39.8%	Yes	
Census Tract 342	3,901	3,377	86.6%	Yes		3,882	1,217	31.3%	Yes	
Census Tract 343	3,828	3,160	82.5%	Yes		3,828	406	10.6%		No
Census Tract 344	4,523	4,338	95.9%	Yes		4,523	1,999	44.2%	Yes	
Census Tract 341	3,309	2,787	84.2%	Yes		3,303	1,183	35.8%	Yes	
TOTAL Roselle Borough	21,637	18,820	87.0%	5	-	21,612	7,225	33.4%	4	1

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Roselle Park Borough										
Census Tract 337	4,663	2,474	53.1%	Yes		4,656	767	16.5%		No
Census Tract 338	5,720	3,004	52.5%	Yes		5,702	890	15.6%		No
Census Tract 339	3,198	1,985	62.1%	Yes		3,198	948	29.6%	Yes	
TOTAL Roselle Park Borough	13,581	7,463	55.0%	3	-	13,556	2,605	19.2%	1	2
Scotch Plains Township										
Census Tract 386.01	8,021	1,986	24.8%		No	7,911	1,009	12.8%		No
Census Tract 386.02	4,137	1,124	27.2%		No	4,133	185	4.5%		No
Census Tract 384	6,272	2,564	40.9%		No	6,272	665	10.6%		No
Census Tract 385	5,775	1,292	22.4%		No	5,759	229	4.0%		No
TOTAL Scotch Plains Township	24,205	6,966	28.8%	-	4	24,075	2,088	8.7%	-	4
Springfield Township										
Census Tract 376.01	4,417	1,069	24.2%		No	4,417	392	8.9%		No
Census Tract 375	6,005	2,673	44.5%		No	6,005	1,042	17.4%		No
Census Tract 376.02	6,984	2,227	31.9%		No	6,983	941	13.5%		No
TOTAL Springfield Township	17,406	5,969	34.3%	-	3	17,405	2,375	13.6%	-	3
Summit										
Census Tract 377	4,780	880	18.4%		No	4,780	312	6.5%		No
Census Tract 378	5,854	1,823	31.1%		No	5,854	437	7.5%		No
Census Tract 379	5,476	1,064	19.4%		No	5,453	352	6.5%		No
Census Tract 380	5,803	3,051	52.6%	Yes		5,687	1,032	18.1%		No
TOTAL Summit	21,913	6,818	31.1%	1	3	21,774	2,133	9.8%	-	4

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Union Township										
Census Tract 326	5,376	4,751	88.4%	Yes		5,376	968	18.0%		No
Census Tract 327	8,242	5,623	68.2%	Yes		8,220	661	8.0%		No
Census Tract 328	4,894	4,485	91.6%	Yes		4,894	1,278	26.1%		No
Census Tract 329.01	4,052	2,355	58.1%	Yes		3,852	423	11.0%		No
Census Tract 329.02	5,063	2,088	41.2%		No	5,051	567	11.2%		No
Census Tract 330	4,480	2,464	55.0%	Yes		4,480	696	15.5%		No
Census Tract 331	6,081	4,218	69.4%	Yes		6,073	1,045	17.2%		No
Census Tract 332	3,784	2,244	59.3%	Yes		3,747	425	11.3%		No
Census Tract 333	4,318	2,458	56.9%	Yes		4,301	272	6.3%		No
Census Tract 334	3,548	1,436	40.5%		No	3,548	360	10.1%		No
Census Tract 335	8,459	4,588	54.2%	Yes		7,151	1,178	16.5%		No
TOTAL Union Township	58,297	36,710	63.0%	9	2	56,693	7,873	13.9%	-	11
Westfield										
Census Tract 368	7,486	1,472	19.7%		No	7,282	523	7.2%		No
Census Tract 364	6,936	961	13.9%		No	6,888	305	4.4%		No
Census Tract 365	5,720	851	14.9%		No	5,713	129	2.3%		No
Census Tract 366	4,126	1,685	40.8%		No	4,126	567	13.7%		No
Census Tract 367	5,609	1,426	25.4%		No	5,609	376	6.7%		No
TOTAL Westfield	29,877	6,395	21.4%	-	5	29,618	1,900	6.4%	-	5
Winfield Township										
Census Tract 361	1,623	362	22.3%		No	1,623	343	21.1%		No
TOTAL Winfield Township	1,623	362	22.3%	-	1	1,623	343	21.1%	-	1
TOTAL Union County	554,033	335,177	60.5%	72	36	547,480	135,584	24.8%	42	66

Table 17C-11

Environmental Justice Populations: Union County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Union County, New Jersey										
Berkeley Heights Township										
Census Tract 382.02	7,060	1,268	18.0%		No	7,031	326	4.6%		No
Census Tract 382.01	6,250	1,842	29.5%		No	5,969	437	7.3%		No
TOTAL Berkeley Heights Township	13,310	3,110	23.4%	-	2	13,000	763	5.9%	-	2
Clark Township										
Census Tract 363.02	3,990	238	6.0%		No	3,990	381	9.5%		No
Census Tract 362	6,461	1,213	18.8%		No	6,448	755	11.7%		No
Census Tract 363.01	5,297	1,246	23.5%		No	5,164	445	8.6%		No
TOTAL Clark Township	15,748	2,697	17.1%	-	3	15,602	1,581	10.1%	-	3
Cranford Township										
Census Tract 370	5,985	1,042	17.4%		No	5,824	75	1.3%		No
Census Tract 371	4,306	268	6.2%		No	4,306	166	3.9%		No
Census Tract 372	4,496	1,127	25.1%		No	4,406	777	17.6%		No
Census Tract 373	4,563	774	17.0%		No	4,563	466	10.2%		No
Census Tract 374	4,664	1,108	23.8%		No	4,664	314	6.7%		No
TOTAL Cranford Township	24,014	4,319	18.0%	-	5	23,763	1,798	7.6%	-	5

Table 17C-14

Environmental Justice Populations: Hunterdon County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Hunterdon County, New Jersey										
Census Tract 119	3,822	479	12.5%		No	3,805	795	20.9%		No
Census Tract 118	2,757	256	9.3%		No	2,757	309	11.2%		No
Census Tract 105	5,133	156	3.0%		No	5,133	351	6.8%		No
Census Tract 106	6,083	228	3.7%		No	6,030	346	5.7%		No
Census Tract 107.01	5,560	1,086	19.5%	Yes		4,761	534	11.2%		No
Census Tract 107.02	3,348	160	4.8%		No	3,312	209	6.3%		No
Census Tract 115	5,216	343	6.6%		No	5,197	718	13.8%		No
Census Tract 116	5,069	468	9.2%		No	5,037	646	12.8%		No
Census Tract 103	2,797	434	15.5%		No	2,775	462	16.6%		No
Census Tract 104	4,610	330	7.2%		No	4,583	450	9.8%		No
Census Tract 111	5,587	827	14.8%		No	5,587	567	10.1%		No
Census Tract 112.01	7,107	911	12.8%		No	7,107	806	11.3%		No
Census Tract 112.02	3,203	322	10.1%		No	3,203	261	8.1%		No
Census Tract 113.04	3,559	473	13.3%		No	3,531	127	3.6%		No
Census Tract 108.01	2,686	580	21.6%	Yes		2,682	337	12.6%		No
Census Tract 110.02	5,747	626	10.9%		No	5,678	464	8.2%		No
Census Tract 113.01	6,659	915	13.7%		No	6,461	766	11.9%		No
Census Tract 113.02	7,250	1,680	23.2%	Yes		7,243	435	6.0%		No
Census Tract 113.03	4,661	768	16.5%	Yes		4,661	331	7.1%		No
Census Tract 114	4,608	2,268	49.2%	Yes		4,514	1,649	36.5%	Yes	
Census Tract 117	3,890	348	8.9%		No	3,856	310	8.0%		No
Census Tract 101	5,812	378	6.5%		No	5,812	294	5.1%		No
Census Tract 102	7,263	623	8.6%		No	7,192	433	6.0%		No
Census Tract 108.02	1,856	257	13.8%		No	1,854	292	15.7%		No
Census Tract 109	3,500	637	18.2%	Yes		3,500	690	19.7%		No
Census Tract 110.01	7,040	2,507	35.6%	Yes		4,788	412	8.6%		No
TOTAL Hunterdon County	124,823	18,060	14.5%	7	19	121,059	12,994	10.7%	1	25

Table 17C-15

Environmental Justice Populations: Mercer County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Mercer County, New Jersey										
Census Tract 1	3,191	2,684	84.1%	Yes		3,191	1,816	56.9%	Yes	
Census Tract 8	2,282	2,119	92.9%	Yes		2,260	1,513	66.9%	Yes	
Census Tract 10	2,659	2,444	91.9%	Yes		2,475	1,592	64.3%	Yes	
Census Tract 24	485	366	75.5%	Yes		-	-	0.0%		No
Census Tract 2	4,065	3,190	78.5%	Yes		4,006	2,758	68.8%	Yes	
Census Tract 3	4,326	3,477	80.4%	Yes		4,326	2,416	55.8%	Yes	
Census Tract 4	4,876	4,277	87.7%	Yes		4,844	3,144	64.9%	Yes	
Census Tract 5	4,641	4,108	88.5%	Yes		4,641	3,003	64.7%	Yes	
Census Tract 6	4,959	4,309	86.9%	Yes		4,959	2,506	50.5%	Yes	
Census Tract 7	3,743	3,277	87.6%	Yes		3,743	1,519	40.6%	Yes	
Census Tract 25	6,722	3,546	52.8%	Yes		6,722	2,298	34.2%	Yes	
Census Tract 26.01	4,674	3,768	80.6%	Yes		4,674	2,033	43.5%	Yes	
Census Tract 26.02	4,425	2,366	53.5%	Yes		4,425	1,069	24.2%		No
Census Tract 27.01	4,092	2,308	56.4%	Yes		4,063	1,451	35.7%	Yes	
Census Tract 27.02	5,956	1,911	32.1%		No	5,956	1,555	26.1%		No
Census Tract 30.01	5,414	628	11.6%		No	5,410	421	7.8%		No
Census Tract 30.02	5,318	854	16.1%		No	5,225	169	3.2%		No
Census Tract 30.03	6,122	1,025	16.7%		No	6,122	686	11.2%		No
Census Tract 30.04	5,237	1,120	21.4%		No	5,236	745	14.2%		No
Census Tract 30.09	5,710	1,545	27.1%		No	5,698	947	16.6%		No
Census Tract 9	3,512	3,126	89.0%	Yes		3,473	2,090	60.2%	Yes	
Census Tract 11.01	2,511	2,403	95.7%	Yes		2,511	1,117	44.5%	Yes	
Census Tract 11.02	3,063	2,934	95.8%	Yes		2,944	2,004	68.1%	Yes	
Census Tract 12	3,722	3,081	82.8%	Yes		3,684	996	27.0%	Yes	
Census Tract 13	4,488	3,421	76.2%	Yes		3,367	1,430	42.5%	Yes	
Census Tract 14.01	3,666	3,567	97.3%	Yes		3,666	2,591	70.7%	Yes	
Census Tract 14.02	2,053	2,045	99.6%	Yes		2,053	1,096	53.4%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 15	3,102	2,781	89.7%	Yes		2,996	2,123	70.9%	Yes	
Census Tract 16	1,267	1,234	97.4%	Yes		1,267	586	46.3%	Yes	
Census Tract 17	3,151	3,077	97.7%	Yes		3,151	1,881	59.7%	Yes	
Census Tract 20	1,343	1,298	96.6%	Yes		1,330	802	60.3%	Yes	
Census Tract 34	2,525	1,696	67.2%	Yes		2,401	421	17.5%		No
Census Tract 35	6,905	3,538	51.2%	Yes		6,862	2,011	29.3%	Yes	
Census Tract 36.01	3,660	2,555	69.8%	Yes		3,660	1,299	35.5%	Yes	
Census Tract 36.02	3,731	2,007	53.8%	Yes		3,718	1,301	35.0%	Yes	
Census Tract 37.03	7,096	2,749	38.7%		No	3,775	863	22.9%		No
Census Tract 37.04	2,877	743	25.8%		No	2,844	427	15.0%		No
Census Tract 39.02	1,915	144	7.5%		No	1,906	214	11.2%		No
Census Tract 39.03	2,531	288	11.4%		No	2,531	227	9.0%		No
Census Tract 39.04	5,976	1,831	30.6%		No	5,976	298	5.0%		No
Census Tract 39.05	4,887	441	9.0%		No	4,869	165	3.4%		No
Census Tract 37.05	5,899	1,933	32.8%		No	5,478	694	12.7%		No
Census Tract 37.06	3,344	950	28.4%		No	3,344	303	9.1%		No
Census Tract 38	7,204	1,583	22.0%		No	6,695	499	7.5%		No
Census Tract 18	4,484	3,147	70.2%	Yes		3,733	2,133	57.1%	Yes	
Census Tract 19	1,609	1,479	91.9%	Yes		1,609	1,192	74.1%	Yes	
Census Tract 21	4,591	4,062	88.5%	Yes		4,591	2,073	45.2%	Yes	
Census Tract 22	5,623	5,423	96.4%	Yes		5,622	2,452	43.6%	Yes	
Census Tract 28	7,177	6,392	89.1%	Yes		7,177	3,050	42.5%	Yes	
Census Tract 29.02	4,683	2,264	48.3%		No	4,673	1,108	23.7%		No
Census Tract 29.03	3,416	897	26.3%		No	3,416	581	17.0%		No
Census Tract 29.04	5,011	928	18.5%		No	5,011	791	15.8%		No
Census Tract 30.06	5,266	798	15.2%		No	5,266	237	4.5%		No
Census Tract 30.07	3,200	233	7.3%		No	3,200	232	7.3%		No
Census Tract 30.08	5,001	1,120	22.4%		No	4,686	564	12.0%		No
Census Tract 31	4,381	1,970	45.0%		No	4,381	811	18.5%		No
Census Tract 32.01	7,859	3,122	39.7%		No	6,221	1,249	20.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 32.02	5,565	1,165	20.9%		No	5,476	479	8.7%		No
Census Tract 33.01	6,863	1,070	15.6%		No	6,454	622	9.6%		No
Census Tract 33.02	7,946	4,623	58.2%	Yes		7,946	739	9.3%		No
Census Tract 43.01	8,660	5,886	68.0%	Yes		8,628	698	8.1%		No
Census Tract 43.04	7,921	3,978	50.2%	Yes		7,900	128	1.6%		No
Census Tract 43.06	5,618	3,275	58.3%	Yes		5,447	163	3.0%		No
Census Tract 43.07	5,738	2,598	45.3%		No	5,738	143	2.5%		No
Census Tract 43.1	9,835	3,714	37.8%		No	9,835	576	5.9%		No
Census Tract 40	5,881	2,339	39.8%		No	5,546	1,161	20.9%		No
Census Tract 42.01	7,867	2,202	28.0%		No	7,757	1,002	12.9%		No
Census Tract 42.03	3,974	1,382	34.8%		No	3,974	534	13.4%		No
Census Tract 42.04	5,209	1,798	34.5%		No	5,174	772	14.9%		No
Census Tract 45.01	6,762	2,282	33.7%		No	1,814	226	12.5%		No
Census Tract 45.02	1,307	171	13.1%		No	1,307	392	30.0%	Yes	
Census Tract 43.09	4,530	1,145	25.3%		No	4,530	347	7.7%		No
Census Tract 44.03	5,375	2,526	47.0%		No	5,215	1,229	23.6%		No
Census Tract 44.04	6,870	3,999	58.2%	Yes		6,870	1,398	20.3%		No
Census Tract 44.05	8,453	4,776	56.5%	Yes		8,396	1,011	12.0%		No
Census Tract 44.06	4,955	2,552	51.5%	Yes		4,939	1,456	29.5%	Yes	
Census Tract 44.07	6,967	2,977	42.7%		No	6,919	1,486	21.5%		No
TOTAL Mercer County	367,922	185,040	50.3%	41	36	351,928	88,114	25.0%	33	44

Table 17C-16

Environmental Justice Populations: Middlesex County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Middlesex County, New Jersey										
Census Tract 85.04	6,573	3,529	53.7%	Yes		6,510	686	10.5%		No
Census Tract 86.01	5,105	2,804	54.9%	Yes		4,948	196	4.0%		No
Census Tract 82.02	14,701	5,330	36.3%		No	14,436	879	6.1%		No
Census Tract 82.04	4,608	1,111	24.1%		No	4,608	727	15.8%		No
Census Tract 82.05	3,401	605	17.8%		No	3,401	742	21.8%		No
Census Tract 86.04	5,975	4,394	73.5%	Yes		5,975	247	4.1%		No
Census Tract 87	3,649	925	25.3%		No	3,571	123	3.4%		No
Census Tract 66.01	2,438	731	30.0%		No	2,430	163	6.7%		No
Census Tract 66.04	6,743	2,975	44.1%		No	6,691	1,217	18.2%		No
Census Tract 66.05	4,012	1,249	31.1%		No	3,931	522	13.3%		No
Census Tract 66.06	2,976	1,202	40.4%		No	2,976	156	5.2%		No
Census Tract 81.03	2,475	569	23.0%		No	2,475	339	13.7%		No
Census Tract 82.06	3,415	461	13.5%		No	3,355	837	24.9%		No
Census Tract 82.07	2,631	321	12.2%		No	2,631	413	15.7%		No
Census Tract 82.08	11,941	4,184	35.0%		No	11,941	1,330	11.1%		No
Census Tract 83	5,921	2,053	34.7%		No	5,921	950	16.0%		No
Census Tract 84.03	7,882	5,374	68.2%	Yes		7,882	772	9.8%		No
Census Tract 84.04	3,843	1,529	39.8%		No	3,843	561	14.6%		No
Census Tract 84.05	4,728	2,912	61.6%	Yes		4,728	282	6.0%		No
Census Tract 85.01	5,875	4,144	70.5%	Yes		5,852	693	11.8%		No
Census Tract 85.02	5,282	3,424	64.8%	Yes		5,282	278	5.3%		No
Census Tract 85.03	8,954	6,985	78.0%	Yes		8,954	779	8.7%		No
Census Tract 86.02	5,157	3,786	73.4%	Yes		5,157	171	3.3%		No
Census Tract 86.05	2,606	2,201	84.5%	Yes		2,606	317	12.2%		No
Census Tract 86.06	4,185	3,006	71.8%	Yes		4,185	573	13.7%		No
Census Tract 77.02	5,922	2,239	37.8%		No	5,852	1,468	25.1%		No
Census Tract 78.01	3,227	1,405	43.5%		No	3,227	428	13.3%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 78.04	5,064	1,556	30.7%		No	4,949	514	10.4%		No
Census Tract 78.05	4,559	1,097	24.1%		No	4,559	292	6.4%		No
Census Tract 78.06	4,152	859	20.7%		No	4,152	748	18.0%		No
Census Tract 79.06	1,496	699	46.7%		No	1,486	320	21.5%		No
Census Tract 79.09	4,123	1,104	26.8%		No	4,123	193	4.7%		No
Census Tract 79.11	3,450	1,317	38.2%		No	3,450	162	4.7%		No
Census Tract 79.12	6,948	2,794	40.2%		No	6,948	867	12.5%		No
Census Tract 66.07	2,875	849	29.5%		No	2,875	164	5.7%		No
Census Tract 66.08	3,697	1,537	41.6%		No	3,697	495	13.4%		No
Census Tract 67.01	3,851	1,173	30.5%		No	3,766	175	4.6%		No
Census Tract 77.03	3,494	962	27.5%		No	3,494	165	4.7%		No
Census Tract 77.04	2,722	692	25.4%		No	2,722	278	10.2%		No
Census Tract 81.01	4,496	1,078	24.0%		No	4,496	700	15.6%		No
Census Tract 81.02	3,773	871	23.1%		No	3,773	478	12.7%		No
Census Tract 82.09	3,609	851	23.6%		No	3,609	222	6.2%		No
Census Tract 6.08	1,568	1,126	71.8%	Yes		1,568	303	19.3%		No
Census Tract 11	4,443	2,027	45.6%		No	4,428	949	21.4%		No
Census Tract 13	4,239	1,422	33.5%		No	4,239	732	17.3%		No
Census Tract 15.06	6,375	5,631	88.3%	Yes		6,103	1,176	19.3%		No
Census Tract 51	6,132	2,783	45.4%		No	3,342	1,917	57.4%	Yes	
Census Tract 52	5,175	3,212	62.1%	Yes		5,139	3,755	73.1%	Yes	
Census Tract 53	3,867	3,321	85.9%	Yes		3,224	2,017	62.6%	Yes	
Census Tract 55	3,849	3,576	92.9%	Yes		3,839	2,273	59.2%	Yes	
Census Tract 56.01	3,154	2,755	87.3%	Yes		3,141	1,557	49.6%	Yes	
Census Tract 56.02	7,677	6,505	84.7%	Yes		7,580	4,809	63.4%	Yes	
Census Tract 57	5,473	4,548	83.1%	Yes		5,473	2,844	52.0%	Yes	
Census Tract 58	5,107	4,505	88.2%	Yes		5,107	3,776	73.9%	Yes	
Census Tract 60.02	7,971	5,542	69.5%	Yes		2,964	1,300	43.9%	Yes	
Census Tract 61.01	5,906	3,513	59.5%	Yes		4,295	1,268	29.5%	Yes	
Census Tract 61.03	5,203	3,411	65.6%	Yes		5,197	1,056	20.3%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 61.04	3,932	2,398	61.0%	Yes		3,932	460	11.7%		No
Census Tract 62.03	9,920	7,183	72.4%	Yes		9,185	1,511	16.5%		No
Census Tract 62.04	1,793	1,331	74.2%	Yes		1,793	251	14.0%		No
Census Tract 62.05	6,420	4,002	62.3%	Yes		6,420	342	5.3%		No
Census Tract 62.06	1,708	739	43.3%		No	1,700	66	3.9%		No
Census Tract 62.07	6,878	4,732	68.8%	Yes		6,878	1,580	23.0%		No
Census Tract 63	6,998	1,677	24.0%		No	6,998	1,571	22.4%		No
Census Tract 84.06	2,263	1,115	49.3%		No	2,263	111	4.9%		No
Census Tract 88	12,341	8,212	66.5%	Yes		2,125	464	21.8%		No
Census Tract 93	5,068	2,925	57.7%	Yes		4,863	2,637	54.2%	Yes	
Census Tract 1	7,554	2,255	29.9%		No	7,554	1,088	14.4%		No
Census Tract 2	6,108	3,687	60.4%	Yes		6,108	1,829	29.9%	Yes	
Census Tract 3	7,252	3,807	52.5%	Yes		7,233	1,921	26.6%		No
Census Tract 4.01	3,306	1,827	55.3%	Yes		3,306	400	12.1%		No
Census Tract 4.03	5,538	4,448	80.3%	Yes		5,538	379	6.8%		No
Census Tract 4.04	5,020	3,495	69.6%	Yes		5,010	1,242	24.8%		No
Census Tract 5.01	4,821	4,228	87.7%	Yes		4,808	1,078	22.4%		No
Census Tract 5.02	6,063	5,198	85.7%	Yes		6,063	1,134	18.7%		No
Census Tract 6.03	2,039	1,289	63.2%	Yes		2,031	153	7.5%		No
Census Tract 6.06	7,802	6,496	83.3%	Yes		7,802	1,147	14.7%		No
Census Tract 7.01	3,154	2,131	67.6%	Yes		3,154	249	7.9%		No
Census Tract 7.02	5,232	3,219	61.5%	Yes		5,228	615	11.8%		No
Census Tract 8.01	4,033	2,186	54.2%	Yes		4,022	518	12.9%		No
Census Tract 8.02	2,806	1,106	39.4%		No	2,806	542	19.3%		No
Census Tract 71.02	5,229	2,541	48.6%		No	5,229	918	17.6%		No
Census Tract 71.03	5,157	3,455	67.0%	Yes		5,157	1,789	34.7%	Yes	
Census Tract 12	5,201	2,531	48.7%		No	5,201	1,347	25.9%		No
Census Tract 15.02	5,964	2,661	44.6%		No	5,964	979	16.4%		No
Census Tract 15.05	2,329	2,157	92.6%	Yes		2,329	212	9.1%		No
Census Tract 16	4,954	3,136	63.3%	Yes		4,954	881	17.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 17.01	5,028	2,339	46.5%		No	5,028	571	11.4%		No
Census Tract 17.02	3,594	1,863	51.8%	Yes		3,594	638	17.8%		No
Census Tract 18.03	3,168	1,472	46.5%		No	3,059	642	21.0%		No
Census Tract 18.04	4,145	2,143	51.7%	Yes		4,145	1,552	37.4%	Yes	
Census Tract 18.05	4,761	3,223	67.7%	Yes		4,761	621	13.0%		No
Census Tract 60.01	2,487	1,345	54.1%	Yes		2,377	302	12.7%		No
Census Tract 64.03	2,768	1,279	46.2%		No	2,768	73	2.6%		No
Census Tract 65	6,865	2,746	40.0%		No	6,845	698	10.2%		No
Census Tract 67.03	6,104	2,868	47.0%		No	6,104	1,095	17.9%		No
Census Tract 68	4,989	2,173	43.6%		No	4,989	948	19.0%		No
Census Tract 69	3,252	1,373	42.2%		No	3,252	723	22.2%		No
Census Tract 70	7,760	2,609	33.6%		No	7,760	1,348	17.4%		No
Census Tract 71.01	3,412	1,238	36.3%		No	3,412	658	19.3%		No
Census Tract 89	4,251	3,162	74.4%	Yes		4,251	1,158	27.2%	Yes	
Census Tract 94	5,490	2,773	50.5%	Yes		5,490	1,334	24.3%		No
Census Tract 32.03	3,678	1,988	54.1%	Yes		3,678	561	15.3%		No
Census Tract 33	6,074	4,553	75.0%	Yes		6,074	1,284	21.1%		No
Census Tract 41	2,679	2,029	75.7%	Yes		2,679	703	26.2%		No
Census Tract 42	2,965	2,285	77.1%	Yes		2,965	885	29.8%	Yes	
Census Tract 43	3,661	3,021	82.5%	Yes		3,661	1,442	39.4%	Yes	
Census Tract 44	4,483	3,848	85.8%	Yes		4,411	1,535	34.8%	Yes	
Census Tract 45	8,347	7,784	93.3%	Yes		8,347	4,072	48.8%	Yes	
Census Tract 46	5,731	5,118	89.3%	Yes		5,712	3,309	57.9%	Yes	
Census Tract 47	4,042	3,287	81.3%	Yes		4,042	1,667	41.2%	Yes	
Census Tract 48	5,639	4,955	87.9%	Yes		5,415	3,199	59.1%	Yes	
Census Tract 49	4,981	4,322	86.8%	Yes		4,902	2,100	42.8%	Yes	
Census Tract 50	4,986	4,468	89.6%	Yes		4,986	1,850	37.1%	Yes	
Census Tract 72.02	4,330	1,688	39.0%		No	4,330	692	16.0%		No
Census Tract 72.03	4,981	2,581	51.8%	Yes		4,981	1,075	21.6%		No
Census Tract 73.01	3,232	1,038	32.1%		No	3,232	250	7.7%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 73.03	1,808	766	42.4%		No	1,808	231	12.8%		No
Census Tract 73.04	6,923	4,270	61.7%	Yes		6,923	964	13.9%		No
Census Tract 74.02	4,865	1,508	31.0%		No	4,823	717	14.9%		No
Census Tract 75	3,160	1,065	33.7%		No	3,160	549	17.4%		No
Census Tract 76	5,612	1,830	32.6%		No	5,612	1,071	19.1%		No
Census Tract 79.05	2,343	816	34.8%		No	2,343	268	11.4%		No
Census Tract 79.07	3,130	942	30.1%		No	3,130	258	8.2%		No
Census Tract 79.08	5,491	4,306	78.4%	Yes		5,491	1,912	34.8%	Yes	
Census Tract 79.1	3,127	912	29.2%		No	2,982	448	15.0%		No
Census Tract 92	4,355	1,425	32.7%		No	4,355	1,008	23.1%		No
Census Tract 14.16	8,991	8,090	90.0%	Yes		8,991	1,390	15.5%		No
Census Tract 19.01	4,976	3,176	63.8%	Yes		4,440	693	15.6%		No
Census Tract 19.03	3,489	1,750	50.2%	Yes		3,468	558	16.1%		No
Census Tract 9.01	2,340	798	34.1%		No	2,340	346	14.8%		No
Census Tract 9.02	4,597	1,855	40.4%		No	4,597	540	11.7%		No
Census Tract 10.01	2,532	871	34.4%		No	2,524	357	14.1%		No
Census Tract 10.02	7,648	4,749	62.1%	Yes		7,441	595	8.0%		No
Census Tract 14.09	3,427	2,470	72.1%	Yes		3,427	161	4.7%		No
Census Tract 14.1	4,043	3,342	82.7%	Yes		4,043	613	15.2%		No
Census Tract 14.11	3,071	2,357	76.8%	Yes		3,071	183	6.0%		No
Census Tract 14.12	3,362	2,241	66.7%	Yes		3,280	269	8.2%		No
Census Tract 14.13	5,408	4,614	85.3%	Yes		5,301	1,042	19.7%		No
Census Tract 14.14	5,219	4,396	84.2%	Yes		5,219	380	7.3%		No
Census Tract 14.15	5,105	3,101	60.7%	Yes		5,105	328	6.4%		No
Census Tract 14.17	1,916	1,243	64.9%	Yes		1,854	106	5.7%		No
Census Tract 15.04	5,569	4,587	82.4%	Yes		5,561	398	7.2%		No
Census Tract 20	4,246	1,878	44.2%		No	4,246	325	7.7%		No
Census Tract 21.01	2,237	557	24.9%		No	2,237	72	3.2%		No
Census Tract 21.02	3,877	1,158	29.9%		No	3,877	496	12.8%		No
Census Tract 22	3,688	1,149	31.2%		No	3,688	353	9.6%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 19.02	2,295	1,086	47.3%		No	2,268	394	17.4%		No
Census Tract 23.01	3,769	1,229	32.6%		No	3,769	281	7.5%		No
Census Tract 23.02	3,685	1,195	32.4%		No	3,685	221	6.0%		No
Census Tract 24.01	5,418	1,766	32.6%		No	5,418	424	7.8%		No
Census Tract 24.02	1,617	685	42.4%		No	1,617	33	2.0%		No
Census Tract 25	6,449	5,135	79.6%	Yes		6,449	1,911	29.6%	Yes	
Census Tract 26.03	5,087	3,782	74.3%	Yes		5,087	475	9.3%		No
Census Tract 26.04	5,947	3,509	59.0%	Yes		5,947	730	12.3%		No
Census Tract 26.05	2,897	1,197	41.3%		No	2,897	342	11.8%		No
Census Tract 27.01	5,567	3,906	70.2%	Yes		5,567	959	17.2%		No
Census Tract 27.03	5,826	3,234	55.5%	Yes		5,794	1,150	19.8%		No
Census Tract 28.05	2,536	1,017	40.1%		No	2,536	321	12.7%		No
Census Tract 29.01	3,541	2,335	65.9%	Yes		3,541	576	16.3%		No
Census Tract 29.02	2,957	1,699	57.5%	Yes		2,957	743	25.1%		No
Census Tract 30.01	4,068	1,889	46.4%		No	4,045	601	14.9%		No
Census Tract 30.02	5,916	4,806	81.2%	Yes		5,870	447	7.6%		No
Census Tract 31.01	2,546	1,378	54.1%	Yes		2,543	256	10.1%		No
Census Tract 31.02	4,710	2,846	60.4%	Yes		4,710	576	12.2%		No
Census Tract 32.01	3,230	1,428	44.2%		No	3,230	559	17.3%		No
Census Tract 34.01	3,697	1,850	50.0%	Yes		3,644	606	16.6%		No
Census Tract 40	4,164	3,359	80.7%	Yes		3,993	1,146	28.7%	Yes	
Census Tract 90	7,199	4,975	69.1%	Yes		3,128	1,355	43.3%	Yes	
Census Tract 80.01	6,534	2,444	37.4%		No	6,522	1,049	16.1%		No
Census Tract 35	3,218	1,917	59.6%	Yes		3,218	666	20.7%		No
Census Tract 36	7,266	5,958	82.0%	Yes		7,251	2,724	37.6%	Yes	
Census Tract 37	3,828	2,619	68.4%	Yes		3,796	712	18.8%		No
Census Tract 38	8,349	6,005	71.9%	Yes		8,349	2,703	32.4%	Yes	
Census Tract 91	3,610	2,294	63.5%	Yes		3,610	427	11.8%		No
TOTAL Middlesex County	825,920	470,267	56.9%	97	78	796,788	154,771	19.4%	30	145

Table 17C-17

Environmental Justice Populations: Monmouth County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Monmouth County, New Jersey										
Census Tract 8120	1,892	257	13.6%		No	1,892	108	5.7%		No
Census Tract 8119	6,940	1,210	17.4%		No	6,940	709	10.2%		No
Census Tract 8125.02	5,082	934	18.4%		No	5,080	404	8.0%		No
Census Tract 8106	6,219	1,396	22.4%		No	6,219	969	15.6%		No
Census Tract 8113.01	6,260	1,982	31.7%	Yes		6,260	1,459	23.3%		No
Census Tract 8097.03	4,400	1,122	25.5%		No	4,400	476	10.8%		No
Census Tract 8097.04	6,083	1,333	21.9%		No	6,083	443	7.3%		No
Census Tract 8100.03	5,298	617	11.6%		No	5,170	549	10.6%		No
Census Tract 8100.04	4,083	607	14.9%		No	4,083	237	5.8%		No
Census Tract 8101.01	4,266	648	15.2%		No	4,266	325	7.6%		No
Census Tract 8101.02	4,185	913	21.8%		No	4,185	279	6.7%		No
Census Tract 8104.01	4,428	876	19.8%		No	3,784	519	13.7%		No
Census Tract 8105.01	4,415	1,247	28.2%	Yes		4,415	806	18.3%		No
Census Tract 8105.02	8,014	2,368	29.5%	Yes		8,014	908	11.3%		No
Census Tract 8105.03	4,066	925	22.7%		No	3,939	406	10.3%		No
Census Tract 8107	1,958	891	45.5%	Yes		1,958	522	26.7%		No
Census Tract 8108	3,349	2,435	72.7%	Yes		3,274	1,112	34.0%	Yes	
Census Tract 8109	2,917	1,636	56.1%	Yes		2,917	1,042	35.7%	Yes	
Census Tract 8110	3,573	2,165	60.6%	Yes		3,573	1,530	42.8%	Yes	
Census Tract 8100.01	5,869	1,050	17.9%		No	5,869	565	9.6%		No
Census Tract 8102	12,366	2,527	20.4%		No	12,366	533	4.3%		No
Census Tract 8103	2,119	552	26.1%		No	2,105	605	28.7%	Yes	
Census Tract 8125.01	6,215	1,022	16.4%		No	6,215	768	12.4%		No
Census Tract 8095.02	8,372	2,791	33.3%	Yes		8,372	580	6.9%		No
Census Tract 8096	7,271	1,348	18.5%		No	7,225	1,036	14.3%		No
Census Tract 8100.02	3,635	255	7.0%		No	3,635	1,019	28.0%	Yes	
Census Tract 8115.01	6,414	1,099	17.1%		No	6,355	502	7.9%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 8086	6,182	900	14.6%		No	6,056	973	16.1%		No
Census Tract 8087.02	4,285	217	5.1%		No	4,119	152	3.7%		No
Census Tract 8111.02	6,489	1,375	21.2%		No	6,475	1,008	15.6%		No
Census Tract 8112	5,852	1,650	28.2%	Yes		5,830	971	16.7%		No
Census Tract 8113.03	4,344	965	22.2%		No	4,344	555	12.8%		No
Census Tract 8113.04	3,336	502	15.0%		No	3,336	399	12.0%		No
Census Tract 8114.01	5,923	1,445	24.4%		No	5,923	46	0.8%		No
Census Tract 8114.02	4,114	831	20.2%		No	4,098	418	10.2%		No
Census Tract 8115.02	3,602	485	13.5%		No	3,602	597	16.6%		No
Census Tract 8116	1,299	280	21.6%		No	1,299	380	29.3%	Yes	
Census Tract 8074	3,047	243	8.0%		No	2,936	749	25.5%		No
Census Tract 8082	4,193	861	20.5%		No	4,193	1,254	29.9%	Yes	
Census Tract 8072	2,304	2,138	92.8%	Yes		2,304	1,611	69.9%	Yes	
Census Tract 8073	3,568	3,446	96.6%	Yes		3,546	2,283	64.4%	Yes	
Census Tract 8075	3,093	2,299	74.3%	Yes		3,093	856	27.7%	Yes	
Census Tract 8076	3,037	2,801	92.2%	Yes		3,037	1,447	47.6%	Yes	
Census Tract 8077	4,192	3,303	78.8%	Yes		4,021	837	20.8%		No
Census Tract 8078	4,253	2,812	66.1%	Yes		4,241	573	13.5%		No
Census Tract 8080.01	3,815	259	6.8%		No	3,793	357	9.4%		No
Census Tract 8080.02	2,218	497	22.4%		No	2,218	214	9.6%		No
Census Tract 8081	4,672	1,135	24.3%		No	4,593	1,416	30.8%	Yes	
Census Tract 8083	1,789	184	10.3%		No	1,789	232	13.0%		No
Census Tract 8084.01	1,951	70	3.6%		No	1,951	287	14.7%		No
Census Tract 8084.02	3,673	959	26.1%		No	3,673	1,105	30.1%	Yes	
Census Tract 8085	5,995	667	11.1%		No	5,905	1,058	17.9%		No
Census Tract 8087.01	4,815	320	6.6%		No	4,730	608	12.9%		No
Census Tract 8088	4,468	349	7.8%		No	4,468	410	9.2%		No
Census Tract 8089	4,564	349	7.6%		No	4,564	594	13.0%		No
Census Tract 8090	1,740	438	25.2%		No	1,740	360	20.7%		No
Census Tract 8091	2,927	105	3.6%		No	2,927	538	18.4%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 8092	1,655	42	2.5%		No	1,655	54	3.3%		No
Census Tract 8093.01	3,088	401	13.0%		No	3,088	330	10.7%		No
Census Tract 8093.02	2,741	48	1.8%		No	2,741	230	8.4%		No
Census Tract 8094	4,697	236	5.0%		No	4,697	214	4.6%		No
Census Tract 8046	2,723	348	12.8%		No	2,723	131	4.8%		No
Census Tract 8048	9,584	2,570	26.8%		No	9,452	2,197	23.2%		No
Census Tract 8097.01	5,310	1,694	31.9%	Yes		5,310	198	3.7%		No
Census Tract 8099.01	4,972	379	7.6%		No	4,972	274	5.5%		No
Census Tract 8099.02	4,658	503	10.8%		No	4,645	301	6.5%		No
Census Tract 8099.03	265	25	9.4%		No	200	104	52.0%	Yes	
Census Tract 8104.02	7,803	1,949	25.0%		No	7,659	443	5.8%		No
Census Tract 8111.01	5,625	1,512	26.9%		No	5,571	1,050	18.8%		No
Census Tract 8005	4,617	726	15.7%		No	4,617	425	9.2%		No
Census Tract 8007.01	4,923	742	15.1%		No	4,923	302	6.1%		No
Census Tract 8007.02	3,726	531	14.3%		No	3,726	403	10.8%		No
Census Tract 8008	6,266	904	14.4%		No	6,266	612	9.8%		No
Census Tract 8010	4,328	742	17.1%		No	4,311	761	17.7%		No
Census Tract 8011	4,295	272	6.3%		No	4,295	240	5.6%		No
Census Tract 8012	3,709	411	11.1%		No	3,709	183	4.9%		No
Census Tract 8013	5,836	297	5.1%		No	5,836	799	13.7%		No
Census Tract 8015	6,405	735	11.5%		No	6,376	388	6.1%		No
Census Tract 8032.01	3,865	1,507	39.0%	Yes		3,704	548	14.8%		No
Census Tract 8023	4,409	772	17.5%		No	4,256	618	14.5%		No
Census Tract 8024	5,240	862	16.5%		No	5,240	574	11.0%		No
Census Tract 8027	4,090	786	19.2%		No	4,067	224	5.5%		No
Census Tract 8028	4,808	866	18.0%		No	4,777	397	8.3%		No
Census Tract 8029	2,071	281	13.6%		No	2,071	248	12.0%		No
Census Tract 8030	5,422	1,543	28.5%	Yes		5,332	875	16.4%		No
Census Tract 8031	3,325	1,132	34.0%	Yes		3,317	194	5.8%		No
Census Tract 8032.02	5,981	1,341	22.4%		No	5,831	589	10.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 8033	6,763	1,689	25.0%		No	6,672	210	3.1%		No
Census Tract 8095.01	8,546	3,457	40.5%	Yes		8,503	432	5.1%		No
Census Tract 8054	4,912	2,208	45.0%	Yes		4,901	1,770	36.1%	Yes	
Census Tract 8055	4,363	2,655	60.9%	Yes		4,273	1,605	37.6%	Yes	
Census Tract 8056	2,478	2,190	88.4%	Yes		2,459	1,162	47.3%	Yes	
Census Tract 8057	2,905	1,469	50.6%	Yes		2,891	1,427	49.4%	Yes	
Census Tract 8058	3,756	2,060	54.8%	Yes		3,703	2,137	57.7%	Yes	
Census Tract 8059	5,259	2,886	54.9%	Yes		5,166	1,695	32.8%	Yes	
Census Tract 8060	3,767	947	25.1%		No	3,739	1,049	28.1%	Yes	
Census Tract 8061	3,076	241	7.8%		No	3,076	902	29.3%	Yes	
Census Tract 8063	2,365	118	5.0%		No	2,365	314	13.3%		No
Census Tract 8070.03	4,418	2,609	59.1%	Yes		4,418	2,124	48.1%	Yes	
Census Tract 8070.04	2,677	780	29.1%	Yes		2,677	736	27.5%	Yes	
Census Tract 8124	1,973	198	10.0%		No	1,973	287	14.5%		No
Census Tract 8045	5,289	1,692	32.0%	Yes		5,289	1,042	19.7%		No
Census Tract 8047	36	12	33.3%	Yes		29	-	0.0%		No
Census Tract 8050.01	4,724	2,462	52.1%	Yes		4,722	1,580	33.5%	Yes	
Census Tract 8051	4,380	1,047	23.9%		No	4,235	840	19.8%		No
Census Tract 8053	5,593	669	12.0%		No	5,593	1,065	19.0%		No
Census Tract 8062.01	3,559	523	14.7%		No	2,360	494	20.9%		No
Census Tract 8062.02	4,349	601	13.8%		No	4,349	587	13.5%		No
Census Tract 8064	4,904	708	14.4%		No	4,904	322	6.6%		No
Census Tract 8065.01	3,919	1,824	46.5%	Yes		3,919	1,348	34.4%	Yes	
Census Tract 8065.02	3,428	983	28.7%	Yes		3,428	613	17.9%		No
Census Tract 8065.03	3,973	359	9.0%		No	3,973	190	4.8%		No
Census Tract 8065.04	2,736	1,401	51.2%	Yes		2,736	327	12.0%		No
Census Tract 8066	5,384	1,098	20.4%		No	5,357	523	9.8%		No
Census Tract 8071	2,630	1,774	67.5%	Yes		2,630	942	35.8%	Yes	
Census Tract 8079	3,908	1,791	45.8%	Yes		3,751	533	14.2%		No
Census Tract 8122	3,242	1,008	31.1%	Yes		3,242	808	24.9%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 8123	5,118	828	16.2%		No	4,954	631	12.7%		No
Census Tract 8001	4,768	714	15.0%		No	4,768	1,010	21.2%		No
Census Tract 8038	3,209	221	6.9%		No	3,209	64	2.0%		No
Census Tract 8039	3,583	328	9.2%		No	3,556	243	6.8%		No
Census Tract 8041	3,212	167	5.2%		No	3,212	266	8.3%		No
Census Tract 8121	1,352	127	9.4%		No	1,337	211	15.8%		No
Census Tract 8002	4,309	267	6.2%		No	4,309	469	10.9%		No
Census Tract 8004	3,386	307	9.1%		No	3,386	424	12.5%		No
Census Tract 8009	5,626	695	12.4%		No	5,560	454	8.2%		No
Census Tract 8014	3,964	216	5.4%		No	3,964	120	3.0%		No
Census Tract 8034	5,000	4,090	81.8%	Yes		4,889	2,399	49.1%	Yes	
Census Tract 8035	2,594	710	27.4%	Yes		2,594	653	25.2%		No
Census Tract 8036	4,478	680	15.2%		No	4,451	881	19.8%		No
Census Tract 8037	5,873	403	6.9%		No	5,865	380	6.5%		No
Census Tract 8042	5,844	326	5.6%		No	5,844	113	1.9%		No
Census Tract 8006.01	5,142	919	17.9%		No	5,142	1,022	19.9%		No
Census Tract 8006.02	3,098	341	11.0%		No	3,098	342	11.0%		No
Census Tract 8016	5,564	1,528	27.5%	Yes		5,562	1,926	34.6%	Yes	
Census Tract 8017	4,171	1,516	36.3%	Yes		4,019	1,993	49.6%	Yes	
Census Tract 8022	3,870	788	20.4%		No	3,862	741	19.2%		No
Census Tract 8018	5,390	1,189	22.1%		No	5,381	889	16.5%		No
Census Tract 8019	3,435	997	29.0%	Yes		3,427	980	28.6%	Yes	
Census Tract 8020	3,599	1,101	30.6%	Yes		3,599	1,012	28.1%	Yes	
Census Tract 8021	6,325	872	13.8%		No	6,271	556	8.9%		No
Census Tract 8025	2,892	920	31.8%	Yes		2,880	308	10.7%		No
Census Tract 8026	4,679	1,950	41.7%	Yes		4,666	795	17.0%		No
TOTAL Monmouth County	621,659	153,907	24.8%	45	98	615,903	100,551	16.3%	32	111

Table 17C-18

Environmental Justice Populations: Morris County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Morris County, New Jersey										
Census Tract 462.01	6,166	1,069	17.3%		No	6,024	660	11.0%		No
Census Tract 462.02	3,617	464	12.8%		No	3,617	137	3.8%		No
Census Tract 462.98	5,226	659	12.6%		No	5,226	796	15.2%		No
Census Tract 462.97	3,420	239	7.0%		No	3,409	175	5.1%		No
Census Tract 457.01	5,883	1,321	22.5%		No	5,883	430	7.3%		No
Census Tract 458.04	5,755	786	13.7%		No	5,755	280	4.9%		No
Census Tract 459.01	1,653	290	17.5%		No	1,644	276	16.8%		No
Census Tract 459.02	7,783	1,044	13.4%		No	7,754	487	6.3%		No
Census Tract 461.03	5,942	1,378	23.2%		No	5,942	994	16.7%		No
Census Tract 461.04	6,968	2,538	36.4%	Yes		6,968	1,590	22.8%		No
Census Tract 464	4,917	451	9.2%		No	4,706	241	5.1%		No
Census Tract 440	5,572	1,456	26.1%		No	5,480	196	3.6%		No
Census Tract 441.01	2,986	371	12.4%		No	2,986	76	2.5%		No
Census Tract 441.02	5,604	625	11.2%		No	5,604	478	8.5%		No
Census Tract 421	4,121	696	16.9%		No	4,054	246	6.1%		No
Census Tract 422	5,589	1,422	25.4%		No	5,589	520	9.3%		No
Census Tract 423.01	2,601	530	20.4%		No	2,601	167	6.4%		No
Census Tract 423.02	3,147	532	16.9%		No	3,147	139	4.4%		No
Census Tract 432	4,335	1,059	24.4%		No	3,036	270	8.9%		No
Census Tract 433.01	3,015	1,241	41.2%	Yes		2,768	286	10.3%		No
Census Tract 433.02	3,018	512	17.0%		No	3,018	261	8.6%		No
Census Tract 433.03	3,633	652	17.9%		No	3,625	79	2.2%		No
Census Tract 434.01	7,307	1,803	24.7%		No	6,970	714	10.2%		No
Census Tract 434.02	5,295	981	18.5%		No	5,148	598	11.6%		No
Census Tract 435	3,528	2,899	82.2%	Yes		3,528	1,418	40.2%	Yes	
Census Tract 436	5,576	2,050	36.8%	Yes		5,525	647	11.7%		No
Census Tract 437	3,698	755	20.4%		No	3,447	531	15.4%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 438	6,107	2,985	48.9%	Yes		6,090	1,712	28.1%	Yes	
Census Tract 442	3,806	267	7.0%		No	3,786	382	10.1%		No
Census Tract 457.03	3,672	1,018	27.7%		No	3,672	263	7.2%		No
Census Tract 457.04	5,384	761	14.1%		No	5,384	254	4.7%		No
Census Tract 428	4,739	688	14.5%		No	4,738	115	2.4%		No
Census Tract 439	4,727	659	13.9%		No	4,717	239	5.1%		No
Census Tract 419.01	6,078	1,645	27.1%		No	6,078	213	3.5%		No
Census Tract 419.02	4,994	1,477	29.6%		No	4,994	674	13.5%		No
Census Tract 420	4,689	1,202	25.6%		No	4,677	340	7.3%		No
Census Tract 425	3,264	466	14.3%		No	3,254	139	4.3%		No
Census Tract 426	8,359	2,196	26.3%		No	6,903	1,102	16.0%		No
Census Tract 427	4,077	974	23.9%		No	4,047	305	7.5%		No
Census Tract 429	3,778	1,067	28.2%		No	3,740	395	10.6%		No
Census Tract 430	4,707	1,143	24.3%		No	4,694	374	8.0%		No
Census Tract 431	3,557	343	9.6%		No	3,557	203	5.7%		No
Census Tract 461.06	8,336	2,873	34.5%	Yes		8,336	1,122	13.5%		No
Census Tract 447.01	4,727	465	9.8%		No	4,710	523	11.1%		No
Census Tract 452	3,530	1,630	46.2%	Yes		3,522	757	21.5%		No
Census Tract 453	4,458	825	18.5%		No	4,246	332	7.8%		No
Census Tract 454.01	5,637	1,828	32.4%	Yes		5,637	1,916	34.0%	Yes	
Census Tract 454.02	5,071	1,506	29.7%		No	5,071	1,097	21.6%		No
Census Tract 455.01	4,809	676	14.1%		No	4,809	249	5.2%		No
Census Tract 455.02	8,618	1,779	20.6%		No	8,618	481	5.6%		No
Census Tract 460	3,177	764	24.0%		No	3,155	739	23.4%		No
Census Tract 461.05	7,669	1,986	25.9%		No	7,669	1,939	25.3%		No
Census Tract 409	4,292	720	16.8%		No	4,173	533	12.8%		No
Census Tract 412	4,270	809	18.9%		No	4,270	270	6.3%		No
Census Tract 413	4,932	629	12.8%		No	4,858	733	15.1%		No
Census Tract 414	5,769	876	15.2%		No	5,769	433	7.5%		No
Census Tract 415	5,905	1,401	23.7%		No	5,905	362	6.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 416.01	7,501	3,676	49.0%	Yes		7,017	860	12.3%		No
Census Tract 416.02	2,586	882	34.1%	Yes		2,586	200	7.7%		No
Census Tract 416.03	4,321	2,407	55.7%	Yes		4,310	588	13.6%		No
Census Tract 416.04	4,670	1,640	35.1%	Yes		4,670	363	7.8%		No
Census Tract 418.01	2,815	1,883	66.9%	Yes		2,815	539	19.1%		No
Census Tract 418.02	4,751	2,413	50.8%	Yes		4,751	394	8.3%		No
Census Tract 443	6,384	2,066	32.4%	Yes		6,384	587	9.2%		No
Census Tract 444.03	5,127	1,139	22.2%		No	5,127	371	7.2%		No
Census Tract 444.04	4,421	974	22.0%		No	4,421	421	9.5%		No
Census Tract 445.01	6,608	1,443	21.8%		No	6,608	1,213	18.4%		No
Census Tract 445.02	4,246	1,529	36.0%	Yes		4,246	633	14.9%		No
Census Tract 448	7,391	6,275	84.9%	Yes		7,232	2,152	29.8%	Yes	
Census Tract 449	5,656	4,379	77.4%	Yes		5,603	1,490	26.6%		No
Census Tract 450	4,930	3,787	76.8%	Yes		4,742	2,059	43.4%	Yes	
Census Tract 451	6,474	4,032	62.3%	Yes		6,469	1,884	29.1%	Yes	
Census Tract 456.02	1,505	1,101	73.2%	Yes		1,505	551	36.6%	Yes	
Census Tract 456.03	4,949	2,456	49.6%	Yes		4,949	756	15.3%		No
Census Tract 463	5,661	1,674	29.6%		No	5,545	576	10.4%		No
Census Tract 444.01	4,667	545	11.7%		No	4,667	261	5.6%		No
Census Tract 446.01	4,856	350	7.2%		No	4,839	491	10.1%		No
Census Tract 446.02	5,485	763	13.9%		No	5,485	720	13.1%		No
Census Tract 447.02	5,967	1,430	24.0%		No	5,967	803	13.5%		No
Census Tract 401.01	3,931	821	20.9%		No	3,931	368	9.4%		No
Census Tract 401.02	6,331	1,284	20.3%		No	5,651	434	7.7%		No
Census Tract 408.01	5,065	885	17.5%		No	5,055	675	13.4%		No
Census Tract 408.03	6,573	2,464	37.5%	Yes		6,573	481	7.3%		No
Census Tract 408.04	3,704	1,404	37.9%	Yes		3,704	281	7.6%		No
Census Tract 408.05	6,029	1,445	24.0%		No	5,944	226	3.8%		No
Census Tract 410	4,503	1,297	28.8%		No	4,412	508	11.5%		No
Census Tract 411	3,895	1,265	32.5%	Yes		3,895	1,373	35.3%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 417.01	5,933	3,097	52.2%	Yes		5,907	914	15.5%		No
Census Tract 417.02	3,184	1,212	38.1%	Yes		3,175	460	14.5%		No
Census Tract 417.04	4,733	2,565	54.2%	Yes		4,733	536	11.3%		No
Census Tract 417.05	1,551	695	44.8%	Yes		1,540	416	27.0%	Yes	
Census Tract 417.06	5,706	3,299	57.8%	Yes		5,679	493	8.7%		No
Census Tract 418.03	4,656	2,393	51.4%	Yes		4,401	147	3.3%		No
Census Tract 402	6,767	1,096	16.2%		No	6,767	988	14.6%		No
Census Tract 403	8,424	967	11.5%		No	8,344	865	10.4%		No
Census Tract 404	4,197	864	20.6%		No	4,197	561	13.4%		No
Census Tract 405	3,394	995	29.3%		No	3,394	774	22.8%		No
Census Tract 406	4,285	929	21.7%		No	4,285	426	9.9%		No
Census Tract 407.01	5,864	1,396	23.8%		No	5,864	444	7.6%		No
Census Tract 407.02	4,190	482	11.5%		No	4,190	202	4.8%		No
TOTAL Morris County	493,379	141,180	28.6%	31	69	486,112	60,372	12.4%	9	91

Table 17C-19

Environmental Justice Populations: Ocean County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Ocean County, New Jersey										
Census Tract 7361.02	8,049	890	11.1%		No	8,049	1,971	24.5%		No
Census Tract 7361.05	3,472	476	13.7%		No	3,472	807	23.2%		No
Census Tract 7380.02	1,298	39	3.0%		No	1,293	233	18.0%		No
Census Tract 9801	-	-	0.0%		No	-	-	0.0%		No
Census Tract 7340.01	8,253	841	10.2%		No	8,253	1,061	12.9%		No
Census Tract 7350.01	7,085	822	11.6%		No	7,085	902	12.7%		No
Census Tract 7350.02	9,770	1,384	14.2%		No	9,500	1,778	18.7%		No
Census Tract 7351.01	2,592	291	11.2%		No	2,592	932	36.0%	Yes	
Census Tract 7360.01	3,723	209	5.6%		No	3,684	539	14.6%		No
Census Tract 7360.02	1,583	85	5.4%		No	1,583	304	19.2%		No
Census Tract 7370	3,367	250	7.4%		No	3,367	1,033	30.7%	Yes	
Census Tract 7361.01	5,883	450	7.6%		No	5,593	730	13.1%		No
Census Tract 7201.03	4,775	370	7.7%		No	4,633	1,453	31.4%	Yes	
Census Tract 7202.03	4,117	527	12.8%		No	4,117	789	19.2%		No
Census Tract 7202.04	5,637	1,685	29.9%	Yes		5,637	1,225	21.7%		No
Census Tract 7312.01	4,361	343	7.9%		No	4,361	1,723	39.5%	Yes	
Census Tract 7312.02	4,067	288	7.1%		No	4,067	1,110	27.3%	Yes	
Census Tract 7312.03	1,650	62	3.8%		No	1,650	379	23.0%		No
Census Tract 7312.04	3,755	280	7.5%		No	3,755	865	23.0%		No
Census Tract 7320.01	6,699	246	3.7%		No	6,648	283	4.3%		No
Census Tract 7200.01	4,215	332	7.9%		No	4,148	859	20.7%		No
Census Tract 7201.01	6,655	1,234	18.5%	Yes		6,537	2,235	34.2%	Yes	
Census Tract 7201.02	3,584	322	9.0%		No	3,521	1,770	50.3%	Yes	
Census Tract 7391	1,641	131	8.0%		No	1,613	456	28.3%	Yes	
Census Tract 7180	8,513	1,074	12.6%		No	8,495	1,262	14.9%		No
Census Tract 7170.01	3,156	753	23.9%	Yes		3,148	598	19.0%		No
Census Tract 7170.02	5,521	1,676	30.4%	Yes		5,378	1,609	29.9%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 7171.01	8,459	1,918	22.7%	Yes		8,377	525	6.3%		No
Census Tract 7171.02	4,750	976	20.5%	Yes		4,750	819	17.2%		No
Census Tract 7175.01	7,200	1,593	22.1%	Yes		7,200	1,729	24.0%		No
Census Tract 7175.02	7,560	859	11.4%		No	7,546	662	8.8%		No
Census Tract 7202.02	3,535	364	10.3%		No	3,535	1,078	30.5%	Yes	
Census Tract 7202.05	3,311	260	7.9%		No	3,188	518	16.2%		No
Census Tract 7202.06	6,077	977	16.1%		No	6,007	1,083	18.0%		No
Census Tract 7210	2,684	708	26.4%	Yes		2,670	828	31.0%	Yes	
Census Tract 7172	8,472	1,164	13.7%		No	8,393	850	10.1%		No
Census Tract 7173	5,761	994	17.3%	Yes		5,739	721	12.6%		No
Census Tract 7174	6,045	1,088	18.0%	Yes		6,036	731	12.1%		No
Census Tract 7351.03	3,994	236	5.9%		No	3,994	674	16.9%		No
Census Tract 7351.04	3,906	685	17.5%	Yes		3,893	763	19.6%		No
Census Tract 7380.01	2,128	56	2.6%		No	2,128	370	17.4%		No
Census Tract 7390	2,320	52	2.2%		No	2,320	276	11.9%		No
Census Tract 7330	9,003	530	5.9%		No	8,957	1,732	19.3%		No
Census Tract 7340.02	6,514	950	14.6%		No	6,514	1,481	22.7%		No
Census Tract 7340.03	7,987	1,585	19.8%	Yes		7,884	2,275	28.9%	Yes	
Census Tract 7310.02	3,685	522	14.2%		No	3,507	572	16.3%		No
Census Tract 7311.02	6,560	1,294	19.7%	Yes		6,551	1,399	21.4%		No
Census Tract 7311.03	4,538	679	15.0%		No	4,319	295	6.8%		No
Census Tract 7320.02	9,229	1,084	11.7%		No	9,229	2,127	23.0%		No
Census Tract 7321.01	6,345	30	0.5%		No	6,229	1,265	20.3%		No
Census Tract 7321.03	2,439	134	5.5%		No	2,426	355	14.6%		No
Census Tract 7321.04	4,092	384	9.4%		No	4,058	729	18.0%		No
Census Tract 7223	3,939	634	16.1%		No	3,857	248	6.4%		No
Census Tract 7228	4,634	2,063	44.5%	Yes		4,633	1,156	25.0%		No
Census Tract 7229	5,691	1,919	33.7%	Yes		5,675	1,594	28.1%	Yes	
Census Tract 7230	5,741	1,352	23.5%	Yes		5,587	1,049	18.8%		No
Census Tract 7231	4,068	860	21.1%	Yes		3,617	721	19.9%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 7232	6,453	918	14.2%		No	6,453	1,136	17.6%		No
Census Tract 7236	2,349	155	6.6%		No	2,349	401	17.1%		No
Census Tract 7240	3,648	1,585	43.4%	Yes		3,648	940	25.8%		No
Census Tract 7250.01	3,092	231	7.5%		No	3,056	612	20.0%		No
Census Tract 7250.02	6,155	1,172	19.0%	Yes		6,098	1,368	22.4%		No
Census Tract 7251	1,979	263	13.3%		No	1,979	387	19.6%		No
Census Tract 7300	2,278	294	12.9%		No	2,273	313	13.8%		No
Census Tract 7312.05	3,638	1,070	29.4%	Yes		3,638	1,361	37.4%	Yes	
Census Tract 7312.06	2,226	99	4.4%		No	2,084	671	32.2%	Yes	
Census Tract 7224.01	5,186	593	11.4%		No	5,181	941	18.2%		No
Census Tract 7224.02	3,803	424	11.1%		No	3,790	661	17.4%		No
Census Tract 7226	2,752	154	5.6%		No	2,740	338	12.3%		No
Census Tract 7227.02	4,196	784	18.7%	Yes		4,166	483	11.6%		No
Census Tract 7233	7,511	2,039	27.1%	Yes		7,480	1,697	22.7%		No
Census Tract 7234	3,319	422	12.7%		No	3,319	415	12.5%		No
Census Tract 7235	2,258	362	16.0%		No	2,249	600	26.7%		No
Census Tract 7260	1,497	210	14.0%		No	1,497	113	7.5%		No
Census Tract 7290	1,601	167	10.4%		No	1,601	449	28.0%	Yes	
Census Tract 7310.01	3,322	379	11.4%		No	3,311	392	11.8%		No
Census Tract 7227.01	4,672	527	11.3%		No	4,672	372	8.0%		No
Census Tract 7311.01	3,304	854	25.8%	Yes		3,264	915	28.0%	Yes	
Census Tract 7270.01	2,155	124	5.8%		No	2,145	354	16.5%		No
Census Tract 7270.02	1,315	48	3.7%		No	1,315	177	13.5%		No
Census Tract 7280	5,229	1,106	21.2%	Yes		5,229	1,169	22.4%		No
Census Tract 7150	11,055	4,477	40.5%	Yes		10,932	5,218	47.7%	Yes	
Census Tract 7152	12,485	2,169	17.4%	Yes		12,343	7,380	59.8%	Yes	
Census Tract 7153.01	8,814	1,313	14.9%		No	8,424	4,630	55.0%	Yes	
Census Tract 7153.02	6,483	480	7.4%		No	6,366	4,676	73.5%	Yes	
Census Tract 7154.01	5,300	180	3.4%		No	5,113	2,749	53.8%	Yes	
Census Tract 7154.02	5,689	114	2.0%		No	5,388	3,802	70.6%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 7155	13,888	1,320	9.5%		No	13,882	7,545	54.4%	Yes	
Census Tract 7156	8,643	1,435	16.6%		No	8,173	4,876	59.7%	Yes	
Census Tract 7157	10,735	1,280	11.9%		No	10,467	6,345	60.6%	Yes	
Census Tract 7158	8,681	1,744	20.1%	Yes		8,441	3,999	47.4%	Yes	
Census Tract 7159.01	2,459	959	39.0%	Yes		2,459	888	36.1%	Yes	
Census Tract 7159.02	4,547	1,596	35.1%	Yes		4,488	1,164	25.9%		No
Census Tract 7160	3,687	313	8.5%		No	3,687	988	26.8%		No
Census Tract 7220.01	5,177	948	18.3%	Yes		5,177	580	11.2%		No
Census Tract 7220.02	8,750	2,428	27.7%	Yes		8,294	2,353	28.4%	Yes	
Census Tract 7221	6,357	1,134	17.8%	Yes		6,108	798	13.1%		No
Census Tract 7130	4,636	842	18.2%	Yes		4,636	764	16.5%		No
Census Tract 7131	6,412	661	10.3%		No	6,391	752	11.8%		No
Census Tract 7132.02	3,967	716	18.0%	Yes		3,951	524	13.3%		No
Census Tract 7132.03	5,063	1,293	25.5%	Yes		5,034	1,374	27.3%	Yes	
Census Tract 7133	3,909	201	5.1%		No	3,805	964	25.3%		No
Census Tract 7134.01	5,006	999	20.0%	Yes		4,789	992	20.7%		No
Census Tract 7134.02	3,155	383	12.1%		No	3,145	762	24.2%		No
Census Tract 7135	2,784	294	10.6%		No	2,784	455	16.3%		No
Census Tract 7136	3,594	397	11.0%		No	3,594	168	4.7%		No
Census Tract 7137	2,590	278	10.7%		No	2,590	350	13.5%		No
Census Tract 7139	6,559	1,847	28.2%	Yes		6,559	1,579	24.1%		No
Census Tract 7140	6,364	1,080	17.0%	Yes		6,352	674	10.6%		No
Census Tract 7141	3,364	455	13.5%		No	3,201	728	22.7%		No
Census Tract 7142	7,586	1,310	17.3%	Yes		7,553	1,305	17.3%		No
Census Tract 7143	3,520	176	5.0%		No	3,520	443	12.6%		No
Census Tract 7222	2,398	214	8.9%		No	2,398	696	29.0%	Yes	
Census Tract 7132.01	2,447	179	7.3%		No	2,447	236	9.6%		No
Census Tract 7101	4,537	400	8.8%		No	4,529	694	15.3%		No
Census Tract 7111	4,260	408	9.6%		No	4,155	384	9.2%		No
Census Tract 7112	4,505	695	15.4%		No	4,487	225	5.0%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 7113	4,084	166	4.1%		No	4,058	433	10.7%		No
Census Tract 7114	5,749	628	10.9%		No	5,749	466	8.1%		No
Census Tract 7120	1,444	118	8.2%		No	1,426	118	8.3%		No
Census Tract 7138	3,540	593	16.8%		No	3,540	662	18.7%		No
Census Tract 7144	846	99	11.7%		No	846	148	17.5%		No
Census Tract 7381	1,564	33	2.1%		No	1,550	239	15.4%		No
Census Tract 9800	-	-	0.0%		No	-	-	0.0%		No
Census Tract 7225	1,756	99	5.6%		No	1,756	395	22.5%		No
TOTAL Ocean County	596,415	91,444	15.3%	39	86	589,122	146,317	24.8%	31	94

Table 17C-20

Environmental Justice Populations: Passaic County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Passaic County, New Jersey										
Census Tract 2462.02	4,995	671	13.4%		No	4,995	172	3.4%		No
Census Tract 2462.03	3,739	772	20.6%		No	3,739	166	4.4%		No
Census Tract 2463	4,824	1,700	35.2%		No	4,796	1,338	27.9%	Yes	
Census Tract 1165	8,088	2,677	33.1%		No	7,985	1,034	12.9%		No
Census Tract 1964.01	4,137	1,032	24.9%		No	4,080	665	16.3%		No
Census Tract 1964.02	6,892	2,340	34.0%		No	6,866	687	10.0%		No
Census Tract 2366.01	4,547	1,342	29.5%		No	4,197	846	20.2%		No
Census Tract 2366.02	7,162	1,158	16.2%		No	7,162	523	7.3%		No
Census Tract 2460.02	2,981	450	15.1%		No	2,807	195	6.9%		No
Census Tract 2460.03	5,790	1,148	19.8%		No	5,615	295	5.3%		No
Census Tract 2462.01	6,345	1,298	20.5%		No	6,191	510	8.2%		No
Census Tract 2568.05	5,277	591	11.2%		No	5,246	728	13.9%		No
Census Tract 2167.01	6,936	844	12.2%		No	6,860	350	5.1%		No
Census Tract 2167.02	5,315	1,140	21.4%		No	5,306	368	6.9%		No
Census Tract 2568.02	3,624	289	8.0%		No	3,624	328	9.1%		No
Census Tract 2568.01	5,503	1,183	21.5%		No	5,464	912	16.7%		No
Census Tract 2568.03	5,234	1,371	26.2%		No	5,043	1,102	21.9%		No
Census Tract 2568.04	6,766	670	9.9%		No	6,615	661	10.0%		No
Census Tract 1244.02	5,288	3,042	57.5%	Yes		5,254	848	16.1%		No
Census Tract 1757.01	5,345	3,571	66.8%	Yes		5,345	1,711	32.0%	Yes	
Census Tract 1242	7,738	3,631	46.9%		No	7,738	1,088	14.1%		No
Census Tract 1243.11	4,909	2,139	43.6%		No	4,877	471	9.7%		No
Census Tract 1243.12	3,989	1,384	34.7%		No	3,562	467	13.1%		No
Census Tract 1243.23	3,241	1,722	53.1%	Yes		3,241	674	20.8%		No
Census Tract 1337.01	5,043	3,836	76.1%	Yes		5,043	1,225	24.3%		No
Census Tract 1337.02	3,282	1,767	53.8%	Yes		3,282	1,045	31.8%	Yes	
Census Tract 1540.01	6,146	1,437	23.4%		No	4,996	266	5.3%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1540.02	8,337	1,565	18.8%		No	8,337	1,575	18.9%		No
Census Tract 1801	7,749	6,747	87.1%	Yes		7,749	2,124	27.4%	Yes	
Census Tract 1802.01	3,874	3,559	91.9%	Yes		3,874	1,359	35.1%	Yes	
Census Tract 1802.02	7,176	6,468	90.1%	Yes		7,118	4,133	58.1%	Yes	
Census Tract 1803	6,355	5,726	90.1%	Yes		6,355	4,129	65.0%	Yes	
Census Tract 1806	4,798	4,605	96.0%	Yes		4,798	1,908	39.8%	Yes	
Census Tract 1818	2,822	2,524	89.4%	Yes		2,152	1,494	69.4%	Yes	
Census Tract 1819	4,854	3,800	78.3%	Yes		4,830	1,995	41.3%	Yes	
Census Tract 1820	1,477	1,395	94.4%	Yes		1,467	1,110	75.7%	Yes	
Census Tract 1821	3,684	3,426	93.0%	Yes		3,553	2,103	59.2%	Yes	
Census Tract 1832	3,042	2,840	93.4%	Yes		3,042	2,190	72.0%	Yes	
Census Tract 2036	5,865	4,631	79.0%	Yes		5,865	2,588	44.1%	Yes	
Census Tract 2238.01	3,053	1,109	36.3%		No	3,053	484	15.9%		No
Census Tract 2238.02	7,567	2,080	27.5%		No	7,417	555	7.5%		No
Census Tract 2239	208	77	37.0%		No	208	180	86.5%	Yes	
Census Tract 2461.01	6,598	1,728	26.2%		No	6,598	781	11.8%		No
Census Tract 2461.03	6,378	1,275	20.0%		No	6,196	401	6.5%		No
Census Tract 2461.04	3,135	514	16.4%		No	3,135	369	11.8%		No
Census Tract 2641.01	6,024	2,957	49.1%		No	6,024	1,780	29.5%	Yes	
Census Tract 2641.02	6,523	1,838	28.2%		No	6,512	1,179	18.1%		No
Census Tract 2642	4,542	4,409	97.1%	Yes		4,489	3,055	68.1%	Yes	
Census Tract 1244.01	7,946	3,094	38.9%		No	7,931	1,663	21.0%		No
Census Tract 1245	5,989	3,275	54.7%	Yes		5,989	1,275	21.3%		No
Census Tract 1246.02	4,804	2,258	47.0%		No	4,777	1,133	23.7%		No
Census Tract 1247	6,144	3,788	61.7%	Yes		6,144	2,042	33.2%	Yes	
Census Tract 1248	4,599	3,372	73.3%	Yes		4,530	1,579	34.9%	Yes	
Census Tract 1249	4,954	4,078	82.3%	Yes		4,954	2,224	44.9%	Yes	
Census Tract 1250	6,802	5,281	77.6%	Yes		6,802	2,249	33.1%	Yes	
Census Tract 1251	3,932	3,105	79.0%	Yes		3,932	1,831	46.6%	Yes	
Census Tract 1752	5,082	5,018	98.7%	Yes		5,031	3,669	72.9%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1753.01	3,629	3,455	95.2%	Yes		3,611	2,182	60.4%	Yes	
Census Tract 1753.02	4,302	4,019	93.4%	Yes		4,274	2,927	68.5%	Yes	
Census Tract 1754.01	5,875	5,583	95.0%	Yes		5,875	3,224	54.9%	Yes	
Census Tract 1754.02	4,491	4,278	95.3%	Yes		4,390	3,206	73.0%	Yes	
Census Tract 1755	7,396	7,134	96.5%	Yes		7,338	4,376	59.6%	Yes	
Census Tract 1756.01	2,517	185	7.4%		No	2,517	220	8.7%		No
Census Tract 1756.02	7,673	6,640	86.5%	Yes		7,656	2,917	38.1%	Yes	
Census Tract 1757.03	4,336	2,855	65.8%	Yes		4,336	1,189	27.4%	Yes	
Census Tract 1757.04	4,138	1,716	41.5%		No	4,078	1,351	33.1%	Yes	
Census Tract 1758.01	3,832	3,619	94.4%	Yes		3,832	2,547	66.5%	Yes	
Census Tract 1758.02	6,812	6,767	99.3%	Yes		6,812	5,007	73.5%	Yes	
Census Tract 1759	4,591	4,410	96.1%	Yes		4,591	3,373	73.5%	Yes	
Census Tract 1810	4,947	4,730	95.6%	Yes		4,947	2,678	54.1%	Yes	
Census Tract 1811	6,515	6,037	92.7%	Yes		6,515	2,719	41.7%	Yes	
Census Tract 1812	4,886	4,784	97.9%	Yes		4,886	2,189	44.8%	Yes	
Census Tract 1813	5,222	5,117	98.0%	Yes		5,222	3,022	57.9%	Yes	
Census Tract 1824	4,900	4,826	98.5%	Yes		4,900	2,469	50.4%	Yes	
Census Tract 1825	7,309	6,699	91.7%	Yes		7,099	1,998	28.1%	Yes	
Census Tract 1826	5,191	4,976	95.9%	Yes		5,191	1,649	31.8%	Yes	
Census Tract 1827	6,824	6,420	94.1%	Yes		6,824	3,556	52.1%	Yes	
Census Tract 1831.01	3,135	2,292	73.1%	Yes		3,125	1,079	34.5%	Yes	
Census Tract 1831.02	4,876	4,240	87.0%	Yes		4,862	2,064	42.5%	Yes	
Census Tract 1243.21	5,846	2,201	37.6%		No	5,814	930	16.0%		No
Census Tract 1243.22	4,387	1,702	38.8%		No	4,387	906	20.7%		No
Census Tract 1246.01	4,636	2,508	54.1%	Yes		4,436	1,543	34.8%	Yes	
Census Tract 1807	2,517	2,469	98.1%	Yes		2,517	1,383	54.9%	Yes	
Census Tract 1808	3,176	3,166	99.7%	Yes		3,176	1,913	60.2%	Yes	
Census Tract 1809	3,662	3,611	98.6%	Yes		3,662	2,285	62.4%	Yes	
Census Tract 1814	3,183	3,090	97.1%	Yes		3,183	2,231	70.1%	Yes	
Census Tract 1815	3,078	3,057	99.3%	Yes		3,078	2,293	74.5%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1817.02	2,712	2,640	97.3%	Yes		2,691	1,678	62.4%	Yes	
Census Tract 1822	3,410	3,082	90.4%	Yes		3,364	2,638	78.4%	Yes	
Census Tract 1823.01	1,544	1,478	95.7%	Yes		1,544	693	44.9%	Yes	
Census Tract 1823.02	5,973	5,938	99.4%	Yes		5,973	3,703	62.0%	Yes	
Census Tract 1828	3,648	3,527	96.7%	Yes		3,648	2,228	61.1%	Yes	
Census Tract 1829	1,895	1,820	96.0%	Yes		1,895	1,360	71.8%	Yes	
Census Tract 1830	6,734	3,882	57.6%	Yes		6,717	3,296	49.1%	Yes	
Census Tract 1433	5,490	1,822	33.2%		No	5,481	1,185	21.6%		No
Census Tract 1432	6,418	1,131	17.6%		No	6,418	793	12.4%		No
Census Tract 1434	6,876	2,906	42.3%		No	6,876	1,564	22.7%		No
Census Tract 1635	8,437	1,337	15.8%		No	8,389	929	11.1%		No
Census Tract 2460.01	6,166	2,291	37.2%		No	4,166	767	18.4%		No
Census Tract 2461.02	3,003	1,445	48.1%		No	2,962	509	17.2%		No
TOTAL Passaic County	503,637	295,632	58.7%	57	43	496,049	162,601	32.8%	57	43

Table 17C-21

Environmental Justice Populations: Somerset County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Somerset County, New Jersey										
Census Tract 534.02	6,614	4,114	62.2%	Yes		6,507	481	7.4%		No
Census Tract 539.01	636	85	13.4%		No	636	64	10.1%		No
Census Tract 542.01	6,966	2,884	41.4%		No	6,913	580	8.4%		No
Census Tract 537.03	3,546	1,099	31.0%		No	3,541	136	3.8%		No
Census Tract 537.04	2,846	665	23.4%		No	2,840	71	2.5%		No
Census Tract 537.05	6,050	2,623	43.4%		No	6,050	521	8.6%		No
Census Tract 537.07	3,781	976	25.8%		No	3,629	101	2.8%		No
Census Tract 538.01	498	83	16.7%		No	496	63	12.7%		No
Census Tract 538.03	8,992	2,738	30.4%		No	8,992	479	5.3%		No
Census Tract 538.05	4,038	833	20.6%		No	4,030	290	7.2%		No
Census Tract 539.04	3,529	1,195	33.9%		No	3,529	174	4.9%		No
Census Tract 539.05	6,591	4,048	61.4%	Yes		6,591	161	2.4%		No
Census Tract 542.02	5,959	2,327	39.1%		No	5,792	357	6.2%		No
Census Tract 501	2,651	979	36.9%		No	2,388	524	21.9%		No
Census Tract 502	2,720	1,874	68.9%	Yes		2,716	672	24.7%		No
Census Tract 503	3,542	1,065	30.1%		No	3,532	315	8.9%		No
Census Tract 504	3,172	1,878	59.2%	Yes		3,172	851	26.8%		No
Census Tract 505	3,951	1,699	43.0%		No	3,950	852	21.6%		No
Census Tract 506	3,914	1,221	31.2%		No	3,896	338	8.7%		No
Census Tract 507.01	4,181	978	23.4%		No	4,139	280	6.8%		No
Census Tract 507.03	4,846	2,924	60.3%	Yes		4,827	608	12.6%		No
Census Tract 507.04	6,771	3,494	51.6%	Yes		6,771	646	9.5%		No
Census Tract 508.01	3,841	785	20.4%		No	3,710	95	2.6%		No
Census Tract 508.02	4,387	1,442	32.9%		No	4,251	306	7.2%		No
Census Tract 509.01	4,632	821	17.7%		No	4,632	295	6.4%		No
Census Tract 514	3,761	1,016	27.0%		No	3,761	790	21.0%		No
Census Tract 515	3,172	1,543	48.6%	Yes		3,172	1,102	34.7%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 516	3,297	1,192	36.2%		No	3,297	968	29.4%	Yes	
Census Tract 536.02	6,091	1,099	18.0%		No	6,091	396	6.5%		No
Census Tract 536.03	4,872	746	15.3%		No	4,865	335	6.9%		No
Census Tract 536.04	3,517	604	17.2%		No	3,517	369	10.5%		No
Census Tract 537.06	5,114	1,707	33.4%		No	5,114	430	8.4%		No
Census Tract 538.04	5,175	2,390	46.2%		No	5,175	578	11.2%		No
Census Tract 526.01	9,130	4,185	45.8%		No	9,003	364	4.0%		No
Census Tract 527	7,678	1,354	17.6%		No	7,678	413	5.4%		No
Census Tract 528	2,575	528	20.5%		No	2,271	262	11.5%		No
Census Tract 529.01	860	170	19.8%		No	857	126	14.7%		No
Census Tract 529.03	5,962	1,682	28.2%		No	5,960	493	8.3%		No
Census Tract 529.04	2,083	246	11.8%		No	1,974	249	12.6%		No
Census Tract 531.02	3,857	2,981	77.3%	Yes		3,857	680	17.6%		No
Census Tract 531.03	5,972	3,939	66.0%	Yes		5,966	740	12.4%		No
Census Tract 531.05	7,362	4,266	57.9%	Yes		7,068	606	8.6%		No
Census Tract 532	7,098	6,333	89.2%	Yes		7,098	1,722	24.3%		No
Census Tract 533	5,233	4,756	90.9%	Yes		5,233	1,774	33.9%	Yes	
Census Tract 534.03	4,529	3,179	70.2%	Yes		4,529	954	21.1%		No
Census Tract 534.04	10,682	7,635	71.5%	Yes		10,656	1,528	14.3%		No
Census Tract 535.01	4,671	1,873	40.1%		No	4,655	635	13.6%		No
Census Tract 543	9,536	4,297	45.1%		No	9,262	1,119	12.1%		No
Census Tract 509.02	3,701	842	22.8%		No	3,603	199	5.5%		No
Census Tract 509.03	5,146	1,333	25.9%		No	5,146	175	3.4%		No
Census Tract 510	6,962	3,294	47.3%		No	6,844	721	10.5%		No
Census Tract 511	3,193	2,114	66.2%	Yes		3,158	1,135	35.9%	Yes	
Census Tract 512	5,156	3,727	72.3%	Yes		5,156	840	16.3%		No
Census Tract 513	1,939	643	33.2%		No	1,938	228	11.8%		No
Census Tract 517	4,760	3,687	77.5%	Yes		4,718	1,532	32.5%	Yes	
Census Tract 518	4,074	3,264	80.1%	Yes		4,073	1,442	35.4%	Yes	
Census Tract 519	3,671	2,430	66.2%	Yes		3,667	223	6.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 520.01	4,049	2,712	67.0%	Yes		4,049	1,312	32.4%	Yes	
Census Tract 520.02	4,947	3,653	73.8%	Yes		4,947	1,510	30.5%	Yes	
Census Tract 521	7,114	3,113	43.8%		No	6,968	522	7.5%		No
Census Tract 522.03	5,307	1,486	28.0%		No	5,217	213	4.1%		No
Census Tract 530	4,534	2,646	58.4%	Yes		4,534	800	17.6%		No
Census Tract 522.01	5,497	1,502	27.3%		No	5,497	368	6.7%		No
Census Tract 522.04	4,916	1,392	28.3%		No	4,916	350	7.1%		No
Census Tract 523	6,039	1,401	23.2%		No	5,858	482	8.2%		No
Census Tract 524	5,617	954	17.0%		No	5,617	660	11.8%		No
Census Tract 526.03	4,093	742	18.1%		No	4,093	397	9.7%		No
Census Tract 541	8,242	2,675	32.5%		No	7,726	602	7.8%		No
TOTAL Somerset County	329,838	144,161	43.7%	22	46	326,314	39,604	12.1%	8	60

Table 17C-22

Environmental Justice Populations: Sussex County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Sussex County, New Jersey										
Census Tract 3741	3,484	581	16.7%	Yes		3,484	439	12.6%		No
Census Tract 3742	2,281	288	12.6%		No	2,261	219	9.7%		No
Census Tract 3740	3,197	237	7.4%		No	3,188	361	11.3%		No
Census Tract 3733	3,155	696	22.1%	Yes		3,155	322	10.2%		No
Census Tract 3734	6,036	322	5.3%		No	6,013	236	3.9%		No
Census Tract 3735	3,601	292	8.1%		No	3,134	521	16.6%		No
Census Tract 3736	2,937	354	12.1%		No	2,871	430	15.0%		No
Census Tract 3738	3,745	799	21.3%	Yes		3,733	741	19.9%		No
Census Tract 3743	3,436	514	15.0%		No	3,436	312	9.1%		No
Census Tract 3744	2,257	200	8.9%		No	2,252	132	5.9%		No
Census Tract 3745	1,782	348	19.5%	Yes		1,782	230	12.9%		No
Census Tract 3746	3,346	582	17.4%	Yes		3,322	328	9.9%		No
Census Tract 3747	3,762	734	19.5%	Yes		3,733	434	11.6%		No
Census Tract 3748	4,030	850	21.1%	Yes		4,015	445	11.1%		No
Census Tract 3749	4,707	1,623	34.5%	Yes		4,645	700	15.1%		No
Census Tract 3711	3,913	325	8.3%		No	3,913	510	13.0%		No
Census Tract 3712	1,870	232	12.4%		No	1,865	578	31.0%	Yes	
Census Tract 3718	7,012	617	8.8%		No	7,012	1,069	15.2%		No
Census Tract 3720	2,919	136	4.7%		No	2,919	315	10.8%		No
Census Tract 3721	1,960	240	12.2%		No	1,949	278	14.3%		No
Census Tract 3722	1,962	143	7.3%		No	1,962	189	9.6%		No
Census Tract 3723	4,164	403	9.7%		No	4,057	781	19.3%		No
Census Tract 3724	2,328	190	8.2%		No	2,317	352	15.2%		No
Census Tract 3725	3,152	549	17.4%	Yes		3,140	665	21.2%		No
Census Tract 3729	3,038	240	7.9%		No	3,034	1,102	36.3%	Yes	
Census Tract 3730	2,317	439	18.9%	Yes		2,309	221	9.6%		No
Census Tract 3731	6,007	1,198	19.9%	Yes		5,994	561	9.4%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 3737	4,165	1,053	25.3%	Yes		3,833	1,030	26.9%		No
Census Tract 3719	2,005	192	9.6%		No	2,005	237	11.8%		No
Census Tract 3739	3,911	129	3.3%		No	3,911	632	16.2%		No
Census Tract 3732	3,522	319	9.1%		No	3,522	254	7.2%		No
Census Tract 3713	3,284	440	13.4%		No	3,284	480	14.6%		No
Census Tract 3714	2,891	406	14.0%		No	2,890	166	5.7%		No
Census Tract 3715.02	5,135	745	14.5%		No	5,135	272	5.3%		No
Census Tract 3715.03	2,910	635	21.8%	Yes		2,910	274	9.4%		No
Census Tract 3716	2,723	275	10.1%		No	2,720	475	17.5%		No
Census Tract 3717	5,273	777	14.7%		No	5,235	476	9.1%		No
Census Tract 3726	4,697	516	11.0%		No	4,697	354	7.5%		No
Census Tract 3727	3,148	257	8.2%		No	3,148	520	16.5%		No
Census Tract 3728	1,740	281	16.1%	Yes		1,739	291	16.7%		No
Census Tract 3710	3,681	245	6.7%		No	3,670	1,202	32.8%	Yes	
TOTAL Sussex County	141,483	19,402	13.7%	14	27	140,194	19,134	13.6%	3	38

Table 17C-23

Environmental Justice Populations: Warren County, NJ

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Warren County, New Jersey										
Census Tract 316.01	4,696	573	12.2%		No	4,553	1,044	22.9%		No
Census Tract 316.02	2,431	319	13.1%		No	2,417	426	17.6%		No
Census Tract 317	2,590	263	10.2%		No	2,590	749	28.9%	Yes	
Census Tract 318	2,737	189	6.9%		No	2,737	394	14.4%		No
Census Tract 319	6,395	590	9.2%		No	6,380	710	11.1%		No
Census Tract 320	6,490	1,658	25.5%	Yes		6,468	1,634	25.3%		No
Census Tract 321.01	3,050	189	6.2%		No	3,050	438	14.4%		No
Census Tract 321.02	5,480	1,306	23.8%	Yes		5,468	775	14.2%		No
Census Tract 306	3,706	920	24.8%	Yes		3,706	1,320	35.6%	Yes	
Census Tract 307	4,575	1,563	34.2%	Yes		4,522	1,750	38.7%	Yes	
Census Tract 308	3,083	805	26.1%	Yes		3,009	1,190	39.5%	Yes	
Census Tract 309	2,980	1,235	41.4%	Yes		2,980	1,246	41.8%	Yes	
Census Tract 322	8,295	1,483	17.9%		No	8,118	1,210	14.9%		No
Census Tract 323	3,208	282	8.8%		No	3,208	419	13.1%		No
Census Tract 324	2,082	196	9.4%		No	2,073	273	13.2%		No
Census Tract 311.01	5,732	651	11.4%		No	5,732	531	9.3%		No
Census Tract 312	7,512	559	7.4%		No	7,452	563	7.6%		No
Census Tract 314.02	4,783	1,354	28.3%	Yes		4,148	1,161	28.0%	Yes	
Census Tract 315	7,397	1,766	23.9%	Yes		7,281	1,449	19.9%		No
Census Tract 311.02	3,891	357	9.2%		No	3,779	630	16.7%		No
Census Tract 313.01	5,450	1,057	19.4%		No	5,439	616	11.3%		No
Census Tract 313.02	4,597	651	14.2%		No	4,597	495	10.8%		No
Census Tract 314.01	4,702	1,433	30.5%	Yes		4,567	931	20.4%		No
TOTAL Warren County	105,862	19,399	18.3%	9	14	104,274	19,954	19.1%	6	17

Table 17C-24

Environmental Justice Populations: Dutchess County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Dutchess County, New York										
Census Tract 602.01	3,524	1,027	29.1%		No	3,516	592	16.8%		No
Census Tract 602.02	4,535	1,421	31.3%		No	4,498	1,265	28.1%	Yes	
Census Tract 1903.01	3,589	1,146	31.9%	Yes		3,579	520	14.5%		No
Census Tract 1904.01	2,227	712	32.0%	Yes		2,221	578	26.0%		No
Census Tract 2103.01	4,275	1,085	25.4%		No	4,223	731	17.3%		No
Census Tract 6400.01	1,442	1,124	77.9%	Yes		-	-	0.0%		No
Census Tract 6400.02	1,442	1,022	70.9%	Yes		37	28	75.7%	Yes	
Census Tract 601	4,710	2,123	45.1%	Yes		4,440	575	13.0%		No
Census Tract 2101.01	5,319	1,876	35.3%	Yes		5,160	1,521	29.5%	Yes	
Census Tract 2102.01	3,863	2,134	55.2%	Yes		3,854	1,005	26.1%		No
Census Tract 1405	2,750	1,145	41.6%	Yes		2,711	453	16.7%		No
Census Tract 1406.02	2,850	910	31.9%	Yes		2,850	522	18.3%		No
Census Tract 1408.01	2,725	319	11.7%		No	2,725	787	28.9%	Yes	
Census Tract 501.02	3,838	954	24.9%		No	3,838	696	18.1%		No
Census Tract 501.03	5,583	621	11.1%		No	5,583	531	9.5%		No
Census Tract 501.04	6,416	1,397	21.8%		No	6,353	854	13.4%		No
Census Tract 502.03	4,866	1,063	21.8%		No	4,866	799	16.4%		No
Census Tract 502.04	2,942	683	23.2%		No	2,925	430	14.7%		No
Census Tract 802.02	2,761	609	22.1%		No	2,721	217	8.0%		No
Census Tract 603.01	4,122	797	19.3%		No	3,976	553	13.9%		No
Census Tract 603.02	2,539	870	34.3%	Yes		2,511	436	17.4%		No
Census Tract 604	2,014	499	24.8%		No	1,986	465	23.4%		No
Census Tract 802.01	4,000	692	17.3%		No	4,000	279	7.0%		No
Census Tract 1404	5,323	1,152	21.6%		No	5,293	592	11.2%		No
Census Tract 1407	6,921	2,004	29.0%		No	6,912	493	7.1%		No
Census Tract 1901.01	3,610	819	22.7%		No	3,601	284	7.9%		No
Census Tract 1901.02	1,841	314	17.1%		No	1,765	320	18.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1902.03	2,530	971	38.4%	Yes		2,530	463	18.3%		No
Census Tract 1902.04	4,995	1,267	25.4%		No	4,994	364	7.3%		No
Census Tract 1904.02	3,245	1,082	33.3%	Yes		3,224	771	23.9%		No
Census Tract 3000	5,648	2,326	41.2%	Yes		5,591	1,811	32.4%	Yes	
Census Tract 200.04	2,923	597	20.4%		No	2,831	140	4.9%		No
Census Tract 200.05	5,023	675	13.4%		No	5,023	332	6.6%		No
Census Tract 1100.03	4,340	575	13.2%		No	4,331	330	7.6%		No
Census Tract 1100.05	2,029	542	26.7%		No	2,029	459	22.6%		No
Census Tract 6100	2,106	1,739	82.6%	Yes		80	5	6.3%		No
Census Tract 200.03	4,391	931	21.2%		No	4,385	791	18.0%		No
Census Tract 502.05	5,654	846	15.0%		No	5,644	516	9.1%		No
Census Tract 702.01	2,826	564	20.0%		No	2,795	674	24.1%		No
Census Tract 1401.01	6,028	2,120	35.2%	Yes		3,763	1,117	29.7%	Yes	
Census Tract 2201	4,764	2,870	60.2%	Yes		4,619	2,084	45.1%	Yes	
Census Tract 2202.01	3,522	2,597	73.7%	Yes		3,082	1,586	51.5%	Yes	
Census Tract 2207	2,537	1,704	67.2%	Yes		2,537	1,074	42.3%	Yes	
Census Tract 2208.01	3,684	1,501	40.7%	Yes		3,494	1,707	48.9%	Yes	
Census Tract 1800.01	4,616	551	11.9%		No	4,616	772	16.7%		No
Census Tract 2000.01	3,179	581	18.3%		No	3,046	688	22.6%		No
Census Tract 2000.02	1,443	243	16.8%		No	1,435	415	28.9%	Yes	
Census Tract 300	4,215	343	8.1%		No	4,205	718	17.1%		No
Census Tract 801.03	4,864	816	16.8%		No	4,856	482	9.9%		No
Census Tract 801.04	3,952	662	16.8%		No	3,931	273	6.9%		No
Census Tract 1300.03	5,473	1,076	19.7%		No	5,457	1,124	20.6%		No
Census Tract 1300.04	1,595	132	8.3%		No	1,587	255	16.1%		No
Census Tract 1300.05	2,635	354	13.4%		No	2,635	765	29.0%	Yes	
Census Tract 701.02	3,492	858	24.6%		No	3,396	738	21.7%		No
Census Tract 703.01	5,654	1,495	26.4%		No	5,649	937	16.6%		No
Census Tract 1402	6,657	1,846	27.7%		No	6,510	1,416	21.8%		No
Census Tract 1403	5,772	2,634	45.6%	Yes		5,455	1,488	27.3%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 4100	4,126	1,504	36.5%	Yes		2,114	461	21.8%		No
Census Tract 701.01	4,469	766	17.1%		No	4,159	1,061	25.5%		No
Census Tract 704.01	4,513	1,403	31.1%		No	2,811	396	14.1%		No
Census Tract 2203	4,708	3,841	81.6%	Yes		4,693	2,458	52.4%	Yes	
Census Tract 2209.01	3,991	2,285	57.3%	Yes		3,991	1,504	37.7%	Yes	
Census Tract 2210.01	3,779	1,028	27.2%		No	3,779	330	8.7%		No
Census Tract 2211	3,396	2,169	63.9%	Yes		3,396	2,235	65.8%	Yes	
Census Tract 1200	2,353	131	5.6%		No	2,353	726	30.9%	Yes	
Census Tract 1700	3,743	602	16.1%		No	3,675	711	19.3%		No
Census Tract 900	2,402	375	15.6%		No	2,392	386	16.1%		No
Census Tract 1500.04	3,481	444	12.8%		No	3,439	578	16.8%		No
Census Tract 1500.05	2,705	354	13.1%		No	2,556	602	23.6%		No
Census Tract 1500.06	1,899	225	11.8%		No	1,899	656	34.5%	Yes	
Census Tract 1600.03	2,663	357	13.4%		No	2,408	418	17.4%		No
Census Tract 1600.04	2,539	230	9.1%		No	2,424	421	17.4%		No
Census Tract 1600.05	2,570	387	15.1%		No	2,404	652	27.1%	Yes	
Census Tract 1500.03	3,069	628	20.5%		No	1,581	450	28.5%	Yes	
Census Tract 400.03	3,904	1,277	32.7%	Yes		3,904	1,427	36.6%	Yes	
Census Tract 1100.04	1,887	403	21.4%		No	1,773	528	29.8%	Yes	
Census Tract 100	4,303	1,032	24.0%		No	4,192	1,807	43.1%	Yes	
Census Tract 400.01	4,492	811	18.1%		No	4,492	1,038	23.1%		No
Census Tract 1000	2,943	545	18.5%		No	2,925	788	26.9%	Yes	
TOTAL Dutchess County	293,754	83,813	28.5%	25	54	277,234	59,454	21.4%	24	55

Table 17C-25

Environmental Justice Populations: Orange County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Orange County, New York										
Census Tract 148	5,789	1,046	18.1%		No	5,789	551	9.5%		No
Census Tract 145.02	5,450	328	6.0%		No	5,450	554	10.2%		No
Census Tract 146	7,082	1,057	14.9%		No	6,971	1,218	17.5%		No
Census Tract 21	3,437	1,055	30.7%		No	3,377	1,209	35.8%	Yes	
Census Tract 22	2,757	628	22.8%		No	2,743	1,098	40.0%	Yes	
Census Tract 23	2,401	516	21.5%		No	2,387	1,014	42.5%	Yes	
Census Tract 116.01	4,187	766	18.3%		No	4,048	1,175	29.0%	Yes	
Census Tract 116.02	3,555	697	19.6%		No	3,544	1,038	29.3%	Yes	
Census Tract 117.01	4,689	925	19.7%		No	4,668	548	11.7%		No
Census Tract 13	3,255	1,455	44.7%	Yes		3,176	614	19.3%		No
Census Tract 16	7,377	4,861	65.9%	Yes		7,265	1,872	25.8%		No
Census Tract 115	6,731	2,291	34.0%		No	5,394	1,362	25.3%		No
Census Tract 117.02	4,492	974	21.7%		No	4,492	1,103	24.6%		No
Census Tract 118.01	4,642	1,475	31.8%		No	4,642	1,330	28.7%	Yes	
Census Tract 118.02	2,626	403	15.3%		No	2,625	253	9.6%		No
Census Tract 145.01	4,159	572	13.8%		No	4,148	348	8.4%		No
Census Tract 151	6,568	4,743	72.2%	Yes		6,543	3,503	53.5%	Yes	
Census Tract 121	3,755	1,361	36.2%		No	3,610	1,244	34.5%	Yes	
Census Tract 122	3,678	825	22.4%		No	3,620	333	9.2%		No
Census Tract 123	5,467	898	16.4%		No	5,356	524	9.8%		No
Census Tract 143.01	5,006	2,262	45.2%	Yes		4,996	1,316	26.3%		No
Census Tract 143.02	7,017	1,841	26.2%		No	6,887	744	10.8%		No
Census Tract 147	4,220	929	22.0%		No	4,202	513	12.2%		No
Census Tract 11	4,242	2,852	67.2%	Yes		4,242	1,094	25.8%		No
Census Tract 12	2,251	1,773	78.8%	Yes		2,232	1,150	51.5%	Yes	
Census Tract 15	4,537	3,359	74.0%	Yes		4,537	1,687	37.2%	Yes	
Census Tract 112	4,122	2,037	49.4%	Yes		3,963	981	24.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 113	8,383	5,552	66.2%	Yes		8,261	2,309	28.0%	Yes	
Census Tract 119	6,558	1,759	26.8%		No	4,972	412	8.3%		No
Census Tract 144	4,517	1,041	23.0%		No	4,510	617	13.7%		No
Census Tract 109.01	3,303	853	25.8%		No	3,275	736	22.5%		No
Census Tract 109.02	5,899	971	16.5%		No	5,883	1,044	17.7%		No
Census Tract 110	4,901	1,552	31.7%		No	4,867	1,196	24.6%		No
Census Tract 111.01	2,608	1,549	59.4%	Yes		2,601	361	13.9%		No
Census Tract 111.02	4,217	2,298	54.5%	Yes		4,210	927	22.0%		No
Census Tract 114	4,090	1,207	29.5%		No	4,069	659	16.2%		No
Census Tract 149	3,534	795	22.5%		No	3,534	562	15.9%		No
Census Tract 132.01	5,228	1,457	27.9%		No	5,220	561	10.7%		No
Census Tract 135	6,147	2,345	38.1%		No	6,147	1,216	19.8%		No
Census Tract 139	4,663	1,454	31.2%		No	4,660	317	6.8%		No
Census Tract 141.02	5,945	3,471	58.4%	Yes		5,945	1,346	22.6%		No
Census Tract 132.02	2,217	785	35.4%		No	2,217	293	13.2%		No
Census Tract 133	6,868	1,350	19.7%		No	6,837	627	9.2%		No
Census Tract 134	3,293	1,077	32.7%		No	3,293	505	15.3%		No
Census Tract 141.01	4,405	2,428	55.1%	Yes		4,375	1,350	30.9%	Yes	
Census Tract 142.01	3,682	917	24.9%		No	3,682	772	21.0%		No
Census Tract 142.02	5,928	1,919	32.4%		No	5,904	549	9.3%		No
Census Tract 150.03	6,396	201	3.1%		No	6,390	4,754	74.4%	Yes	
Census Tract 150.04	7,389	98	1.3%		No	7,353	5,643	76.7%	Yes	
Census Tract 150.05	5,127	225	4.4%		No	5,127	3,941	76.9%	Yes	
Census Tract 150.06	6,353	74	1.2%		No	6,072	5,095	83.9%	Yes	
Census Tract 137	2,614	1,288	49.3%	Yes		2,614	395	15.1%		No
Census Tract 126.02	3,031	1,725	56.9%	Yes		3,031	876	28.9%	Yes	
Census Tract 129	2,858	301	10.5%		No	2,855	168	5.9%		No
Census Tract 130	4,559	1,094	24.0%		No	4,559	786	17.2%		No
Census Tract 131	5,028	703	14.0%		No	4,983	216	4.3%		No
Census Tract 136	6,383	1,921	30.1%		No	3,307	111	3.4%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 138	3,168	1,032	32.6%		No	3,168	450	14.2%		No
Census Tract 101.01	4,711	1,174	24.9%		No	4,668	304	6.5%		No
Census Tract 105	8,112	4,000	49.3%	Yes		7,860	1,352	17.2%		No
Census Tract 152	10,722	4,149	38.7%		No	10,433	1,624	15.6%		No
Census Tract 106	7,183	1,785	24.9%		No	7,086	1,225	17.3%		No
Census Tract 107	6,724	2,059	30.6%		No	6,718	1,579	23.5%		No
Census Tract 108.01	4,285	1,325	30.9%		No	4,285	820	19.1%		No
Census Tract 108.02	5,684	1,261	22.2%		No	5,611	1,203	21.4%		No
Census Tract 4	4,392	3,453	78.6%	Yes		4,245	2,748	64.7%	Yes	
Census Tract 102	5,104	1,558	30.5%		No	5,104	671	13.1%		No
Census Tract 1	3,437	1,784	51.9%	Yes		2,709	1,046	38.6%	Yes	
Census Tract 2	2,974	1,933	65.0%	Yes		2,966	1,353	45.6%	Yes	
Census Tract 3	6,903	6,051	87.7%	Yes		6,846	3,491	51.0%	Yes	
Census Tract 5.01	2,842	2,348	82.6%	Yes		2,839	1,516	53.4%	Yes	
Census Tract 5.02	3,763	3,164	84.1%	Yes		3,756	1,950	51.9%	Yes	
Census Tract 6	4,022	3,471	86.3%	Yes		4,015	2,445	60.9%	Yes	
Census Tract 101.02	5,520	2,153	39.0%		No	5,508	727	13.2%		No
Census Tract 103	3,585	1,210	33.8%		No	3,549	590	16.6%		No
Census Tract 104	3,795	1,580	41.6%	Yes		3,795	475	12.5%		No
Census Tract 126.01	4,503	2,232	49.6%	Yes		4,503	612	13.6%		No
Census Tract 127	4,135	2,117	51.2%	Yes		4,135	1,371	33.2%	Yes	
Census Tract 128	4,905	1,728	35.2%		No	4,883	1,117	22.9%		No
TOTAL Orange County	380,085	135,906	35.8%	26	53	370,342	95,389	25.8%	25	54

Table 17C-26

Environmental Justice Populations: Putnam County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Putnam County, New York										
Census Tract 107	2,433	286	11.8%		No	2,433	459	18.9%		No
Census Tract 108	3,457	702	20.3%		No	3,457	435	12.6%		No
Census Tract 110	4,066	758	18.6%		No	4,061	464	11.4%		No
Census Tract 111	5,152	785	15.2%		No	5,152	604	11.7%		No
Census Tract 112	7,290	1,248	17.1%		No	7,104	661	9.3%		No
Census Tract 109	7,531	1,795	23.8%	Yes		7,531	899	11.9%		No
Census Tract 106	3,825	303	7.9%		No	3,825	428	11.2%		No
Census Tract 103	4,804	1,489	31.0%	Yes		4,800	544	11.3%		No
Census Tract 104	3,263	837	25.7%	Yes		3,255	325	10.0%		No
Census Tract 115	6,345	1,162	18.3%		No	6,183	411	6.6%		No
Census Tract 116	6,129	787	12.8%		No	6,090	829	13.6%		No
Census Tract 117	4,930	823	16.7%		No	4,919	577	11.7%		No
Census Tract 118	8,139	3,375	41.5%	Yes		8,128	1,514	18.6%		No
Census Tract 113	4,069	543	13.3%		No	4,069	573	14.1%		No
Census Tract 114	5,225	756	14.5%		No	5,225	481	9.2%		No
Census Tract 102	8,411	1,873	22.3%		No	7,661	1,624	21.2%		No
Census Tract 105	5,179	956	18.5%		No	5,061	547	10.8%		No
Census Tract 119	5,084	1,345	26.5%	Yes		4,947	587	11.9%		No
Census Tract 101	3,455	1,204	34.8%	Yes		3,411	358	10.5%		No
TOTAL Putnam County	98,787	21,027	21.3%	6	13	97,312	12,320	12.7%	-	19

Table 17C-27

Environmental Justice Populations: Rockland County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Rockland County, New York										
Census Tract 134.01	4,787	1,407	29.4%		No	4,765	793	16.6%		No
Census Tract 134.02	3,771	1,005	26.7%		No	3,771	336	8.9%		No
Census Tract 130.01	2,917	706	24.2%		No	2,714	516	19.0%		No
Census Tract 105.03	2,429	1,137	46.8%	Yes		2,429	401	16.5%		No
Census Tract 116.01	3,352	355	10.6%		No	3,352	335	10.0%		No
Census Tract 116.02	5,830	1,127	19.3%		No	5,762	1,182	20.5%		No
Census Tract 116.03	5,409	1,409	26.0%		No	5,239	850	16.2%		No
Census Tract 119.01	3,968	1,820	45.9%	Yes		3,789	559	14.8%		No
Census Tract 119.02	3,207	1,410	44.0%	Yes		3,207	849	26.5%		No
Census Tract 120	3,768	634	16.8%		No	3,768	360	9.6%		No
Census Tract 117	3,116	649	20.8%		No	3,111	340	10.9%		No
Census Tract 118	918	583	63.5%	Yes		918	296	32.2%	Yes	
Census Tract 109.02	4,090	1,610	39.4%		No	4,090	567	13.9%		No
Census Tract 111.01	5,896	2,209	37.5%		No	5,667	619	10.9%		No
Census Tract 111.02	6,217	3,120	50.2%	Yes		6,205	1,192	19.2%		No
Census Tract 130.03	2,854	703	24.6%		No	2,373	394	16.6%		No
Census Tract 131	6,309	3,177	50.4%	Yes		6,309	1,738	27.5%	Yes	
Census Tract 132	3,387	1,217	35.9%		No	2,724	452	16.6%		No
Census Tract 108.04	4,261	1,486	34.9%		No	4,054	339	8.4%		No
Census Tract 109.01	4,809	1,168	24.3%		No	4,809	179	3.7%		No
Census Tract 112	6,609	1,488	22.5%		No	6,609	198	3.0%		No
Census Tract 113.03	5,622	1,914	34.0%		No	5,622	685	12.2%		No
Census Tract 114.03	5,690	1,414	24.9%		No	5,690	377	6.6%		No
Census Tract 128	6,891	1,001	14.5%		No	6,891	589	8.5%		No
Census Tract 130.02	5,433	1,307	24.1%		No	4,968	347	7.0%		No
Census Tract 113.01	7,704	5,969	77.5%	Yes		7,497	3,100	41.3%	Yes	
Census Tract 113.02	5,244	1,630	31.1%		No	5,238	723	13.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 114.01	4,250	1,385	32.6%		No	4,241	220	5.2%		No
Census Tract 114.04	4,181	1,952	46.7%	Yes		4,181	554	13.3%		No
Census Tract 114.05	4,487	2,767	61.7%	Yes		4,487	412	9.2%		No
Census Tract 115.04	7,273	6,438	88.5%	Yes		7,108	1,664	23.4%		No
Census Tract 115.05	3,313	182	5.5%		No	3,309	2,700	81.6%	Yes	
Census Tract 115.06	5,621	255	4.5%		No	5,448	4,584	84.1%	Yes	
Census Tract 121.01	6,345	594	9.4%		No	6,308	3,890	61.7%	Yes	
Census Tract 121.02	9,503	141	1.5%		No	9,468	8,046	85.0%	Yes	
Census Tract 121.03	5,899	17	0.3%		No	5,899	3,841	65.1%	Yes	
Census Tract 121.05	6,508	344	5.3%		No	6,398	5,138	80.3%	Yes	
Census Tract 121.06	4,808	1,009	21.0%		No	4,808	3,041	63.2%	Yes	
Census Tract 122.02	6,527	6,194	94.9%	Yes		6,525	3,689	56.5%	Yes	
Census Tract 122.03	3,375	111	3.3%		No	3,375	1,960	58.1%	Yes	
Census Tract 122.04	3,908	237	6.1%		No	3,908	2,311	59.1%	Yes	
Census Tract 123	6,283	4,356	69.3%	Yes		6,133	3,862	63.0%	Yes	
Census Tract 124.01	4,989	3,367	67.5%	Yes		4,989	1,759	35.3%	Yes	
Census Tract 124.02	5,377	4,893	91.0%	Yes		5,283	2,040	38.6%	Yes	
Census Tract 125.01	5,088	1,015	19.9%		No	5,045	1,798	35.6%	Yes	
Census Tract 125.02	5,513	1,887	34.2%		No	5,503	1,502	27.3%	Yes	
Census Tract 126	6,478	1,696	26.2%		No	6,459	436	6.8%		No
Census Tract 127	4,542	981	21.6%		No	4,542	828	18.2%		No
Census Tract 101.02	4,755	1,528	32.1%		No	4,755	491	10.3%		No
Census Tract 102	4,538	1,483	32.7%		No	4,519	752	16.6%		No
Census Tract 105.01	4,922	2,139	43.5%	Yes		4,922	411	8.4%		No
Census Tract 106.01	3,960	2,715	68.6%	Yes		3,899	1,206	30.9%	Yes	
Census Tract 106.02	6,663	5,079	76.2%	Yes		6,623	2,106	31.8%	Yes	
Census Tract 107.01	4,376	3,004	68.6%	Yes		4,215	1,221	29.0%	Yes	
Census Tract 107.02	3,953	3,647	92.3%	Yes		3,953	1,534	38.8%	Yes	
Census Tract 107.03	3,736	2,987	80.0%	Yes		3,736	1,701	45.5%	Yes	
Census Tract 108.01	4,558	1,095	24.0%		No	4,558	399	8.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 108.02	5,195	1,235	23.8%		No	5,195	418	8.0%		No
Census Tract 108.03	5,413	1,686	31.1%		No	5,413	508	9.4%		No
Census Tract 105.02	7,075	4,330	61.2%	Yes		7,075	2,495	35.3%	Yes	
Census Tract 115.01	7,818	775	9.9%		No	7,812	1,355	17.3%		No
Census Tract 115.02	7,844	3,655	46.6%	Yes		7,781	1,752	22.5%		No
Census Tract 133	2,540	581	22.9%		No	2,539	406	16.0%		No
Census Tract 110	2,262	481	21.3%		No	2,091	203	9.7%		No
Census Tract 101.01	6,058	1,711	28.2%		No	6,058	925	15.3%		No
TOTAL Rockland County	324,422	119,607	36.9%	22	43	320,132	90,474	28.3%	24	41

Table 17C-28

Environmental Justice Populations: Suffolk County, NY

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Suffolk County, New York										
Census Tract 1232.01	2,252	1,688	75.0%	Yes		2,217	565	25.5%		No
Census Tract 1233.01	7,687	7,237	94.1%	Yes		7,624	1,722	22.6%		No
Census Tract 1111	7,898	5,311	67.2%	Yes		7,851	2,998	38.2%	Yes	
Census Tract 1119	5,055	814	16.1%		No	5,041	465	9.2%		No
Census Tract 1122.06	7,581	1,047	13.8%		No	7,303	561	7.7%		No
Census Tract 1235	6,278	2,514	40.0%	Yes		5,842	1,601	27.4%	Yes	
Census Tract 1236	3,277	264	8.1%		No	3,268	214	6.5%		No
Census Tract 1237.01	7,272	5,895	81.1%	Yes		7,148	2,290	32.0%	Yes	
Census Tract 1237.02	8,532	4,229	49.6%	Yes		8,526	2,903	34.0%	Yes	
Census Tract 1238.01	3,931	1,000	25.4%		No	3,931	617	15.7%		No
Census Tract 1241.01	4,184	873	20.9%		No	4,178	496	11.9%		No
Census Tract 1244.02	3,629	444	12.2%		No	3,629	98	2.7%		No
Census Tract 1238.02	3,826	1,204	31.5%		No	3,814	884	23.2%		No
Census Tract 1241.02	3,496	737	21.1%		No	3,496	655	18.7%		No
Census Tract 1242	5,357	1,168	21.8%		No	5,324	662	12.4%		No
Census Tract 1244.01	3,474	341	9.8%		No	3,206	594	18.5%		No
Census Tract 1223	3,916	1,312	33.5%		No	3,442	602	17.5%		No
Census Tract 1224.04	3,412	1,247	36.5%	Yes		3,390	497	14.7%		No
Census Tract 1225.02	4,931	4,699	95.3%	Yes		4,919	442	9.0%		No
Census Tract 1229.01	6,316	1,911	30.3%		No	6,139	860	14.0%		No
Census Tract 1229.02	4,313	583	13.5%		No	4,292	570	13.3%		No
Census Tract 1230.01	5,713	2,039	35.7%		No	5,713	669	11.7%		No
Census Tract 1230.02	4,690	1,915	40.8%	Yes		4,618	840	18.2%		No
Census Tract 1232.02	8,558	7,934	92.7%	Yes		8,541	1,870	21.9%		No
Census Tract 1233.02	2,025	1,924	95.0%	Yes		1,978	633	32.0%	Yes	
Census Tract 1234.01	4,258	1,765	41.5%	Yes		4,250	890	20.9%		No
Census Tract 1234.02	6,366	1,933	30.4%		No	6,366	878	13.8%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1239	5,634	1,867	33.1%		No	5,569	833	15.0%		No
Census Tract 1240.01	5,051	1,234	24.4%		No	5,032	907	18.0%		No
Census Tract 1240.02	3,257	1,019	31.3%		No	3,257	302	9.3%		No
Census Tract 1243	6,593	1,695	25.7%		No	6,385	1,496	23.4%		No
Census Tract 1467.04	2,050	257	12.5%		No	2,050	282	13.8%		No
Census Tract 1467.05	2,862	317	11.1%		No	2,862	320	11.2%		No
Census Tract 1467.06	2,609	246	9.4%		No	2,596	205	7.9%		No
Census Tract 1468	6,174	707	11.5%		No	6,118	954	15.6%		No
Census Tract 1469.01	5,123	294	5.7%		No	5,123	373	7.3%		No
Census Tract 1469.02	3,769	198	5.3%		No	3,421	373	10.9%		No
Census Tract 1470.01	4,257	451	10.6%		No	4,257	240	5.6%		No
Census Tract 1470.03	4,801	892	18.6%		No	4,801	375	7.8%		No
Census Tract 1471	3,075	381	12.4%		No	3,068	227	7.4%		No
Census Tract 1231.01	3,170	670	21.1%		No	3,149	384	12.2%		No
Census Tract 1231.02	4,129	1,066	25.8%		No	4,129	772	18.7%		No
Census Tract 1245	5,075	706	13.9%		No	5,075	373	7.3%		No
Census Tract 1246.01	2,637	240	9.1%		No	2,637	305	11.6%		No
Census Tract 1246.02	4,344	387	8.9%		No	4,344	534	12.3%		No
Census Tract 1121.03	4,569	685	15.0%		No	4,147	852	20.5%		No
Census Tract 1122.11	4,437	950	21.4%		No	4,425	304	6.9%		No
Census Tract 1227.07	3,119	963	30.9%		No	3,119	536	17.2%		No
Census Tract 1228.01	5,072	3,067	60.5%	Yes		5,022	1,127	22.4%		No
Census Tract 1352.01	2,116	130	6.1%		No	2,116	150	7.1%		No
Census Tract 1352.05	5,060	696	13.8%		No	5,060	379	7.5%		No
Census Tract 1352.08	3,091	275	8.9%		No	3,091	174	5.6%		No
Census Tract 1456.02	6,903	6,268	90.8%	Yes		6,823	1,861	27.3%	Yes	
Census Tract 1456.03	6,442	5,524	85.7%	Yes		6,360	1,936	30.4%	Yes	
Census Tract 1456.04	4,645	4,008	86.3%	Yes		4,600	1,841	40.0%	Yes	
Census Tract 1459.01	3,158	1,840	58.3%	Yes		3,131	605	19.3%		No
Census Tract 1459.02	10,721	9,389	87.6%	Yes		10,645	3,137	29.5%	Yes	

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1459.03	5,411	2,198	40.6%	Yes		5,392	1,323	24.5%		No
Census Tract 1460.01	6,018	5,033	83.6%	Yes		5,874	1,555	26.5%		No
Census Tract 1460.02	5,924	4,963	83.8%	Yes		5,870	1,856	31.6%	Yes	
Census Tract 1467.03	4,117	2,089	50.7%	Yes		4,072	470	11.5%		No
Census Tract 2011	6,037	4,432	73.4%	Yes		5,496	1,438	26.2%		No
Census Tract 1112.01	3,481	1,977	56.8%	Yes		3,339	958	28.7%	Yes	
Census Tract 1112.02	5,371	2,184	40.7%	Yes		5,371	1,262	23.5%		No
Census Tract 1114.02	4,842	1,097	22.7%		No	4,826	619	12.8%		No
Census Tract 1115.06	3,630	1,335	36.8%	Yes		3,595	709	19.7%		No
Census Tract 1120.01	5,475	1,441	26.3%		No	5,426	611	11.3%		No
Census Tract 1120.02	4,847	925	19.1%		No	4,659	726	15.6%		No
Census Tract 1121.02	3,805	803	21.1%		No	3,805	79	2.1%		No
Census Tract 1121.04	2,109	571	27.1%		No	2,102	214	10.2%		No
Census Tract 1122.04	3,916	624	15.9%		No	3,903	403	10.3%		No
Census Tract 1122.1	6,915	2,118	30.6%		No	6,902	450	6.5%		No
Census Tract 1122.12	3,568	1,089	30.5%		No	3,407	263	7.7%		No
Census Tract 1122.13	5,091	2,129	41.8%	Yes		5,037	425	8.4%		No
Census Tract 1122.14	6,219	1,519	24.4%		No	6,219	851	13.7%		No
Census Tract 1224.03	2,296	1,818	79.2%	Yes		2,296	302	13.2%		No
Census Tract 1224.05	3,447	2,952	85.6%	Yes		3,380	476	14.1%		No
Census Tract 1224.06	4,997	4,936	98.8%	Yes		4,973	1,909	38.4%	Yes	
Census Tract 1225.01	4,832	4,665	96.5%	Yes		4,768	2,604	54.6%	Yes	
Census Tract 1226.01	5,886	2,368	40.2%	Yes		5,813	626	10.8%		No
Census Tract 1226.02	4,825	1,961	40.6%	Yes		4,635	1,053	22.7%		No
Census Tract 1226.03	5,692	2,142	37.6%	Yes		5,645	906	16.0%		No
Census Tract 1227.04	2,147	1,161	54.1%	Yes		2,112	265	12.5%		No
Census Tract 1227.05	3,123	1,491	47.7%	Yes		3,119	789	25.3%		No
Census Tract 1227.06	4,045	1,623	40.1%	Yes		4,035	1,048	26.0%		No
Census Tract 1228.02	4,143	1,597	38.5%	Yes		4,129	535	13.0%		No
Census Tract 1472	6,172	3,545	57.4%	Yes		6,154	1,260	20.5%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1473	8,218	5,704	69.4%	Yes		8,143	1,302	16.0%		No
Census Tract 1474.01	5,630	1,310	23.3%		No	5,580	486	8.7%		No
Census Tract 1474.02	3,284	364	11.1%		No	3,284	89	2.7%		No
Census Tract 1475.01	6,989	1,369	19.6%		No	6,962	920	13.2%		No
Census Tract 1475.02	6,233	433	6.9%		No	6,132	155	2.5%		No
Census Tract 1475.03	1,405	114	8.1%		No	1,405	37	2.6%		No
Census Tract 1476.01	2,238	262	11.7%		No	2,168	238	11.0%		No
Census Tract 1477.02	5,010	456	9.1%		No	5,000	794	15.9%		No
Census Tract 1352.04	4,642	274	5.9%		No	4,633	527	11.4%		No
Census Tract 1352.09	3,065	446	14.6%		No	3,065	229	7.5%		No
Census Tract 1353.01	3,692	476	12.9%		No	3,672	189	5.1%		No
Census Tract 1353.03	4,093	421	10.3%		No	4,074	394	9.7%		No
Census Tract 1353.04	3,340	199	6.0%		No	3,340	201	6.0%		No
Census Tract 1354.01	6,662	825	12.4%		No	6,448	521	8.1%		No
Census Tract 1354.03	4,546	1,046	23.0%		No	4,532	610	13.5%		No
Census Tract 1456.05	4,172	3,527	84.5%	Yes		3,982	1,124	28.2%	Yes	
Census Tract 1457.01	4,964	1,887	38.0%	Yes		4,922	1,263	25.7%		No
Census Tract 1457.02	7,209	5,939	82.4%	Yes		7,034	1,930	27.4%	Yes	
Census Tract 1457.03	4,210	3,011	71.5%	Yes		4,191	929	22.2%		No
Census Tract 1457.04	6,993	5,547	79.3%	Yes		6,926	1,142	16.5%		No
Census Tract 1458.03	4,944	1,258	25.4%		No	4,934	773	15.7%		No
Census Tract 1458.04	3,341	1,752	52.4%	Yes		3,281	580	17.7%		No
Census Tract 1458.05	5,703	1,485	26.0%		No	5,678	727	12.8%		No
Census Tract 1458.07	4,192	1,011	24.1%		No	4,192	309	7.4%		No
Census Tract 1458.08	3,001	804	26.8%		No	3,001	302	10.1%		No
Census Tract 1460.03	9,998	8,024	80.3%	Yes		9,838	1,882	19.1%		No
Census Tract 1461.02	2,848	2,378	83.5%	Yes		2,830	651	23.0%		No
Census Tract 1461.03	4,435	1,678	37.8%	Yes		4,422	764	17.3%		No
Census Tract 1461.05	6,454	5,411	83.8%	Yes		6,439	1,629	25.3%		No
Census Tract 1461.06	5,362	4,619	86.1%	Yes		5,143	1,335	26.0%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1462.01	5,623	5,021	89.3%	Yes		5,571	1,871	33.6%	Yes	
Census Tract 1462.02	4,205	3,842	91.4%	Yes		4,168	1,323	31.7%	Yes	
Census Tract 1462.03	4,923	3,893	79.1%	Yes		4,882	2,194	44.9%	Yes	
Census Tract 1462.04	6,720	5,820	86.6%	Yes		6,718	2,090	31.1%	Yes	
Census Tract 1462.05	2,363	286	12.1%		No	2,358	347	14.7%		No
Census Tract 1462.06	2,141	747	34.9%		No	2,141	344	16.1%		No
Census Tract 1463	2,241	1,072	47.8%	Yes		2,177	703	32.3%	Yes	
Census Tract 1464.02	3,883	760	19.6%		No	3,858	523	13.6%		No
Census Tract 1464.03	4,927	4,096	83.1%	Yes		4,858	1,875	38.6%	Yes	
Census Tract 1464.04	3,706	2,587	69.8%	Yes		3,676	1,282	34.9%	Yes	
Census Tract 1465	5,579	1,177	21.1%		No	5,529	456	8.2%		No
Census Tract 1466.04	4,430	1,471	33.2%		No	4,430	666	15.0%		No
Census Tract 1466.05	983	262	26.7%		No	983	88	9.0%		No
Census Tract 1466.06	6,908	892	12.9%		No	6,908	702	10.2%		No
Census Tract 1466.07	2,354	502	21.3%		No	2,341	385	16.4%		No
Census Tract 1476.02	4,746	327	6.9%		No	4,746	439	9.2%		No
Census Tract 1477.01	3,442	457	13.3%		No	3,195	291	9.1%		No
Census Tract 1478.03	3,126	157	5.0%		No	3,126	364	11.6%		No
Census Tract 1585.02	3,708	960	25.9%		No	3,667	929	25.3%		No
Census Tract 1585.06	2,595	404	15.6%		No	2,595	136	5.2%		No
Census Tract 1586.04	4,842	1,237	25.5%		No	4,783	661	13.8%		No
Census Tract 1586.08	4,123	1,779	43.1%	Yes		4,074	802	19.7%		No
Census Tract 1586.09	4,624	1,069	23.1%		No	4,619	656	14.2%		No
Census Tract 1478.02	3,738	268	7.2%		No	3,648	376	10.3%		No
Census Tract 1479.02	4,103	357	8.7%		No	4,103	331	8.1%		No
Census Tract 1595.1	194	94	48.5%	Yes		194	47	24.2%		No
Census Tract 1466.08	2,596	870	33.5%		No	2,596	527	20.3%		No
Census Tract 1466.11	3,233	888	27.5%		No	3,233	326	10.1%		No
Census Tract 1466.12	5,204	974	18.7%		No	5,202	387	7.4%		No
Census Tract 1466.13	3,961	897	22.6%		No	3,961	687	17.3%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1466.14	4,790	433	9.0%		No	4,770	329	6.9%		No
Census Tract 1466.15	4,431	863	19.5%		No	4,413	426	9.7%		No
Census Tract 1478.04	5,604	535	9.5%		No	5,456	605	11.1%		No
Census Tract 1479.01	4,299	778	18.1%		No	4,299	807	18.8%		No
Census Tract 1586.05	5,046	1,035	20.5%		No	5,046	654	13.0%		No
Census Tract 1586.06	4,912	1,023	20.8%		No	4,803	656	13.7%		No
Census Tract 1586.07	3,139	893	28.4%		No	3,105	461	14.8%		No
Census Tract 1587.07	1,836	527	28.7%		No	1,836	175	9.5%		No
Census Tract 1587.11	5,410	1,105	20.4%		No	5,410	1,110	20.5%		No
Census Tract 1587.12	7,844	3,302	42.1%	Yes		7,516	1,916	25.5%		No
Census Tract 1588.02	4,942	531	10.7%		No	4,923	256	5.2%		No
Census Tract 1588.03	6,360	1,563	24.6%		No	6,339	501	7.9%		No
Census Tract 1588.04	7,657	2,343	30.6%		No	7,638	1,311	17.2%		No
Census Tract 1589	7,797	3,467	44.5%	Yes		7,788	2,284	29.3%	Yes	
Census Tract 1590	4,587	1,502	32.7%		No	4,583	1,131	24.7%		No
Census Tract 1591.02	6,330	2,196	34.7%		No	6,068	1,469	24.2%		No
Census Tract 1591.03	5,820	4,460	76.6%	Yes		5,565	2,368	42.6%	Yes	
Census Tract 1591.05	7,487	2,477	33.1%		No	7,477	1,590	21.3%		No
Census Tract 1591.06	6,597	2,799	42.4%	Yes		5,755	1,080	18.8%		No
Census Tract 1591.07	3,658	860	23.5%		No	3,628	809	22.3%		No
Census Tract 1591.08	7,494	2,802	37.4%	Yes		7,494	609	8.1%		No
Census Tract 1592.01	2,769	589	21.3%		No	2,769	461	16.6%		No
Census Tract 1592.03	5,586	481	8.6%		No	5,563	711	12.8%		No
Census Tract 1592.04	4,251	1,301	30.6%		No	4,035	758	18.8%		No
Census Tract 1593	2,041	154	7.5%		No	2,041	232	11.4%		No
Census Tract 1101.02	4,932	733	14.9%		No	4,861	259	5.3%		No
Census Tract 1102	5,037	506	10.0%		No	5,037	557	11.1%		No
Census Tract 1109.01	2,777	366	13.2%		No	2,777	312	11.2%		No
Census Tract 1109.02	4,474	2,742	61.3%	Yes		4,461	1,679	37.6%	Yes	
Census Tract 1103	5,031	407	8.1%		No	5,030	506	10.1%		No

NEIGHBORHOOD/CENSUS TRACT	TOTAL POPULATION	MINORITY POPULATION	MINORITY RATE	MINORITY TRACT		PERSONS FOR WHOM POVERTY STATUS IS DETERMINED	PERSONS UP TO 1.99X POVERTY RATE	POVERTY RATE	LOW-INCOME TRACT	
				(YES)	(NO)				(YES)	(NO)
Census Tract 1104.01	2,219	95	4.3%		No	2,219	178	8.0%		No
Census Tract 1104.02	3,221	195	6.1%		No	3,221	183	5.7%		No
Census Tract 1105.01	2,937	432	14.7%		No	2,937	286	9.7%		No
Census Tract 1105.02	2,783	191	6.9%		No	2,783	136	4.9%		No
Census Tract 1106	7,328	587	8.0%		No	7,328	937	12.8%		No
Census Tract 1108.01	1,948	84	4.3%		No	1,941	197	10.1%		No
Census Tract 1110.01	2,011	368	18.3%		No	1,936	211	10.9%		No
Census Tract 1110.02	5,432	3,285	60.5%	Yes		5,371	2,117	39.4%	Yes	
Census Tract 1113	4,445	347	7.8%		No	4,402	496	11.3%		No
Census Tract 1114.01	1,368	286	20.9%		No	1,327	141	10.6%		No
Census Tract 1115.03	4,479	895	20.0%		No	4,479	668	14.9%		No
Census Tract 1115.04	1,554	296	19.0%		No	1,541	90	5.8%		No
Census Tract 1115.05	7,130	3,444	48.3%	Yes		6,776	1,401	20.7%		No
Census Tract 1117.03	3,015	328	10.9%		No	3,015	223	7.4%		No
Census Tract 1117.04	3,466	340	9.8%		No	3,466	295	8.5%		No
Census Tract 1118.02	2,911	437	15.0%		No	2,891	159	5.5%		No
Census Tract 1118.03	2,914	426	14.6%		No	2,912	219	7.5%		No
Census Tract 1118.04	2,505	282	11.3%		No	2,505	154	6.1%		No
Census Tract 1347.02	5,495	704	12.8%		No	5,495	800	14.6%		No
Census Tract 1347.03	3,719	169	4.5%		No	3,719	320	8.6%		No
Census Tract 1351.01	4,238	1,029	24.3%		No	4,238	240	5.7%		No
Census Tract 1351.02	4,535	655	14.4%		No	4,535	540	11.9%		No
Census Tract 1351.03	5,014	321	6.4%		No	4,985	233	4.7%		No
Census Tract 1108.03	6,056	756	12.5%		No	5,880	405	6.9%		No
Census Tract 1116.01	4,403	475	10.8%		No	4,376	680	15.5%		No
Census Tract 1116.02	2,605	125	4.8%		No	2,602	277	10.6%		No
Census Tract 1117.01	5,937	802	13.5%		No	5,918	1,030	17.4%		No
Census Tract 1118.01	6,314	1,344	21.3%		No	6,314	569	9.0%		No
Census Tract 1347.04	2,528	256	10.1%		No	2,319	245	10.6%		No
Census Tract 1349.02	4,738	315	6.6%		No	4,408	326	7.4%		No

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

*[Appendix 17D:
Technical Memorandum –
Considerations for Environmental Justice
Communities with Existing Pollution or
Health Burdens]*

2023

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Appendix 17D: Technical Memorandum –

Considerations for Environmental Justice Communities with Existing Pollution or Health Burdens

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Attachments

Appendix A:	Studies Linking Pollutants to Health Outcomes
Appendix B:	Pre-Existing Air Pollutant and Chronic Disease Burden Maps
Appendix C:	Pre-Existing Tract-Level Traffic Proximity, Air Pollutant, and Chronic Disease Burdens
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17D-1. Introduction

The Federal Highway Administration (FHWA), the Federal lead agency for the Central Business District (CBD) Tolling Program (the Project) and the Project Sponsors (collectively, the Triborough Bridge and Tunnel Authority [TBTA]—an affiliate of the Metropolitan Transportation Authority [MTA]—the New York State Department of Transportation [NYSDOT], and the New York City Department of Transportation [NYCDOT]) issued a notice of availability of an Environmental Assessment (EA) prepared in accordance with the National Environmental Policy Act (NEPA) on August 10, 2022.

Chapter 10, “Air Quality,” of the EA includes a regulatory analysis performed in accordance with the Clean Air Act and the Final Transportation Conformity Rule (40 CFR Parts 51 and 93). The EA air quality analysis uses U.S. Environmental Protection Agency (USEPA) developed air quality models and follows guidance issued at both the Federal and State levels. The EA air quality modeling in the EA analyzes the air quality effects of the Project on a regional and local level, including hot-spot analyses for particulate matter emissions, in order to disclose the predicted Project-related changes in air pollutant burdens on a county level and to ensure that the Project-level conformity requirements were met. The EA’s air quality assessment for conformity showed that the Project will not create any new or worsen any existing violation of the National Ambient Air Quality Standards (NAAQS) nor would the Project delay timely attainment of any NAAQS.

The USEPA participated as a cooperating agency throughout the development of the EA prior to its publication. USEPA also submitted comments on the EA on September 22, 2022, during the official public review period. A complete response to USEPA’s comments is provided in **Appendix 18C, “Comments and Responses.”** This Technical Memorandum provides additional USEPA air quality data, Centers for Disease Control and Prevention (CDC) PLACES program chronic-disease prevalence data, as well as state and local public health data, to more completely address comments from the USEPA and from members of the public relating to effects of traffic diversions, both increases and decreases, on environmental justice communities that are already burdened by pre-existing air pollution and associated health risks.¹

The air-quality analysis in the EA is a quantitative, model-driven assessment undertaken pursuant to agency guidance and interagency consultation. This Technical Memorandum expands that discussion by: (1) describing how and why traffic, and especially truck traffic, contributes to pollutant burdens and how these pollutants are associated with health outcomes; (2) providing a broader historical context with respect to historical land use patterns, current traffic, and pre-existing air pollution or health burdens; and (3) detailing the changes in highway traffic that could result from the Project proximate to environmental justice census tracts already experiencing pre-existing air pollutant and/or chronic disease burdens, as compared to communities nationwide, that could be more vulnerable to effects of increased traffic

¹ These air-quality and chronic disease burden data are available from multiple sources. Here, these data are from U.S. Environmental Protection Agency’s (USEPA) 2021 EIScreen data release and the Centers for Disease Control and Prevention (CDC) Environmental Justice Index (EJI) 2022 data release.

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(“potentially vulnerable communities”).² The Technical Memorandum identifies locations where the Project would reduce traffic, thereby having a positive effect on existing conditions, as well as where it could increase traffic, thus adding to pre-existing burdens on potentially vulnerable communities. Finally, the Technical Memorandum identifies a package of mitigation measures to address potential traffic diversions and associated pollutant emissions or health effects resulting from the Project, to avoid creating a disproportionately high and adverse effect.³

As in the EA, this Technical Memorandum focuses on the 10-county environmental justice study area consistent with **Chapter 17, “Environmental Justice,”** which includes all of New York City; Nassau County, New York; and four counties in New Jersey (Bergen, Essex, Hudson, and Union).

Section 17.5 of Chapter 17, “Environmental Justice,” and Appendix 17A, “Environmental Justice: Methodology,” describe the locations of environmental justice populations within the 10-county environmental justice study area as well as data sources and methods used to identify those locations. As detailed in **Chapter 17**, environmental justice populations were identified based on census tracts that were either minority or low-income, based on criteria developed in consultation with FHWA.⁴ Census tracts were considered to be minority if at least 50 percent of the census tract’s population identifies as minority or if the percentage of population identifying as minority in the census tract exceeds the share of minority population in the county where that census tract is located. Census tracts were considered to be low-income when the percentage of individuals with household incomes up to twice the Federal poverty

² Beyond the changes in highway traffic that could result from the Project, the analysis also takes into consideration reasonably foreseeable transportation projects. These are determined in coordination with the region’s Metropolitan Planning Organization, New York Metropolitan Transportation Council (NYMTC), as described in **Chapter 4A, “Regional Transportation Effects and Modeling.”**

³ As per Federal Highway Administration (FHWA) Order 6640.23A, a disproportionately high and adverse effect on a minority or low-income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population. Consideration of whether effects would be disproportionately high and adverse includes consideration of any measures to avoid, minimize, or mitigate potentially adverse effects.

⁴ As noted in the USEPA’s September 22, 2022, letter concerning the Project, New York State’s Climate Leadership and Community Protection Act (CLCPA) requires that State agencies and authorities, when issuing administrative approvals and decisions, not disproportionately burden areas identified as “Disadvantaged Communities” by the Climate Justice Working Group and prioritize reductions of greenhouse gas emissions and co-pollutants in those communities. The Climate Justice Working Group released a draft list of Disadvantaged Communities to which this provision applies in 2021, and the final list of Disadvantaged Communities (by census tract) for all of New York State in March 2023. The criteria used to identify Disadvantaged Communities include climate change risks, and are different from the criteria used to identify environmental justice communities. Further, the Disadvantaged Communities are only relevant to New York State counties. Thus, the list of Disadvantaged Communities for the Project’s environmental justice study area differs somewhat from the environmental justice communities identified in the EA. Of the New York census tracts in the final list of Disadvantaged Communities located within the environmental justice study area for the EA, 955 of 1,002 are also identified as environmental justice communities in the EA, **Chapter 17, “Environmental Justice.”** In other words, 47 Disadvantaged Communities census tracts were not identified as environmental justice census tracts, though many of them are within the same communities as environmental justice census tracts. (Of note, the environmental justice analysis in the EA includes 776 New York census tracts that are not designated as Disadvantaged Communities.) With respect to the 47 Disadvantaged Communities census tracts that are not environmental justice census tracts in the environmental justice study area: 44 are within the broader communities for which current environmental and health burdens are evaluated in this technical Memorandum and three are within communities not addressed in this Technical Memorandum; however, further review indicates that one of those would experience a benefit (reduced traffic), and the other two would experience no change in traffic effects, under all tolling scenarios.

threshold in the census tract was higher than that percentage for the 28-county region. The census tracts identified as minority or low-income are considered environmental justice communities in this Technical Memorandum and are consistent with those identified in **Chapter 17, “Environmental Justice.”**

As shown in **Figure 17D-1**, environmental justice census tracts in the Manhattan CBD are generally located in the neighborhoods of Chinatown, the Lower East Side, and Hell’s Kitchen/Clinton, with several additional tracts in other neighborhoods. Outside the Manhattan CBD, environmental justice populations span more than 300 different neighborhoods and local communities. Importantly, of the 3,106 census tracts in the 10-county study region, over 70 percent (2,193) are environmental justice communities and fewer than 30 percent (914) are non-environmental justice communities (**Figure 17D-2**). Thus, both positive and adverse Project effects are likely to be experienced by more environmental justice communities than non-environmental justice communities.

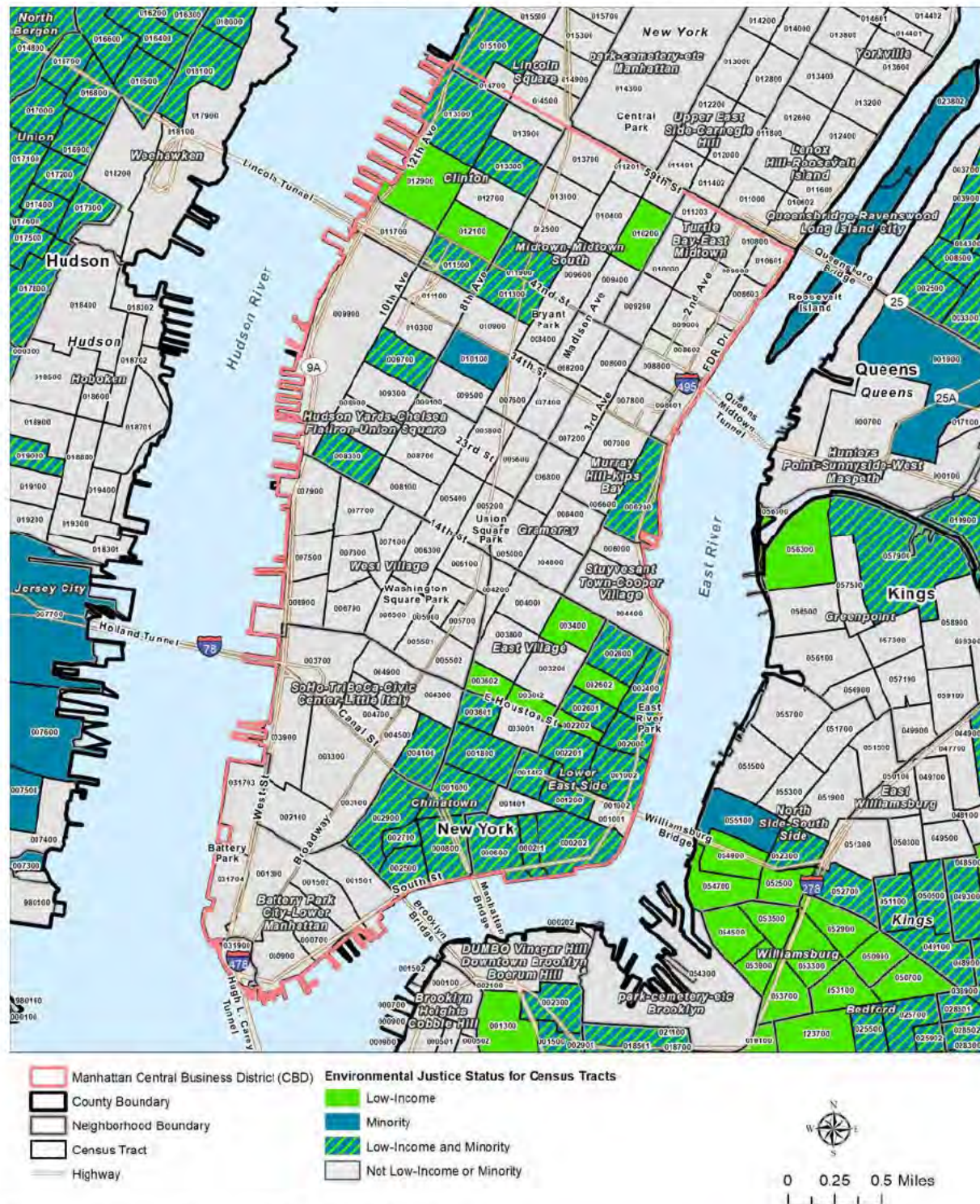
As discussed in the EA, all tolling scenarios in the CBD Tolling Alternative would provide benefit by reducing automobile and truck trips to the Manhattan CBD, reducing vehicle miles traveled (VMT) to and within the Manhattan CBD and regionally, and shifting auto trips to transit. The Project will also bring broad benefits by generating revenue for investment in transit, which is particularly beneficial to environmental justice populations who rely on public transit for commuting and other trips. However, depending on the CBD Tolling Scenario recommended by the Traffic Mobility Review Board and adopted by the TBTA Board, the Project would result in traffic diversions around Manhattan, into the Bronx and northern New Jersey, and through Brooklyn into Staten Island, as some people who would otherwise travel through the Manhattan CBD would choose a different path to avoid the new toll.

This Technical Memorandum begins with a discussion of pollutants associated with vehicle traffic and associated health effects, a summary description of populations at higher risk, and the importance of proximity to traffic. To provide context, the discussion continues with an historical description of how the 10-county environmental justice study area—and the environmental justice communities therein—developed. A depiction of pre-existing pollutant and health-burdens across the study area follows before presenting the changes in traffic, associated with the CBD Tolling Alternative, and where these changes would occur relative to environmental justice populations already overburdened with pre-existing pollutant or chronic disease burdens, relative to national percentiles. The Technical Memorandum also shows the distribution of decreases and increases in traffic among environmental justice communities and non-environmental justice communities with pre-existing pollutant or chronic disease burdens. The Technical Memorandum identifies potential adverse effects on certain potentially vulnerable communities and describes mitigation measures to which the Project Sponsors are committing to address those potential adverse effects. The Technical Memorandum concludes that with the implementation of the mitigation commitments, the Project would not cause a disproportionately high and adverse effect on environmental justice populations.

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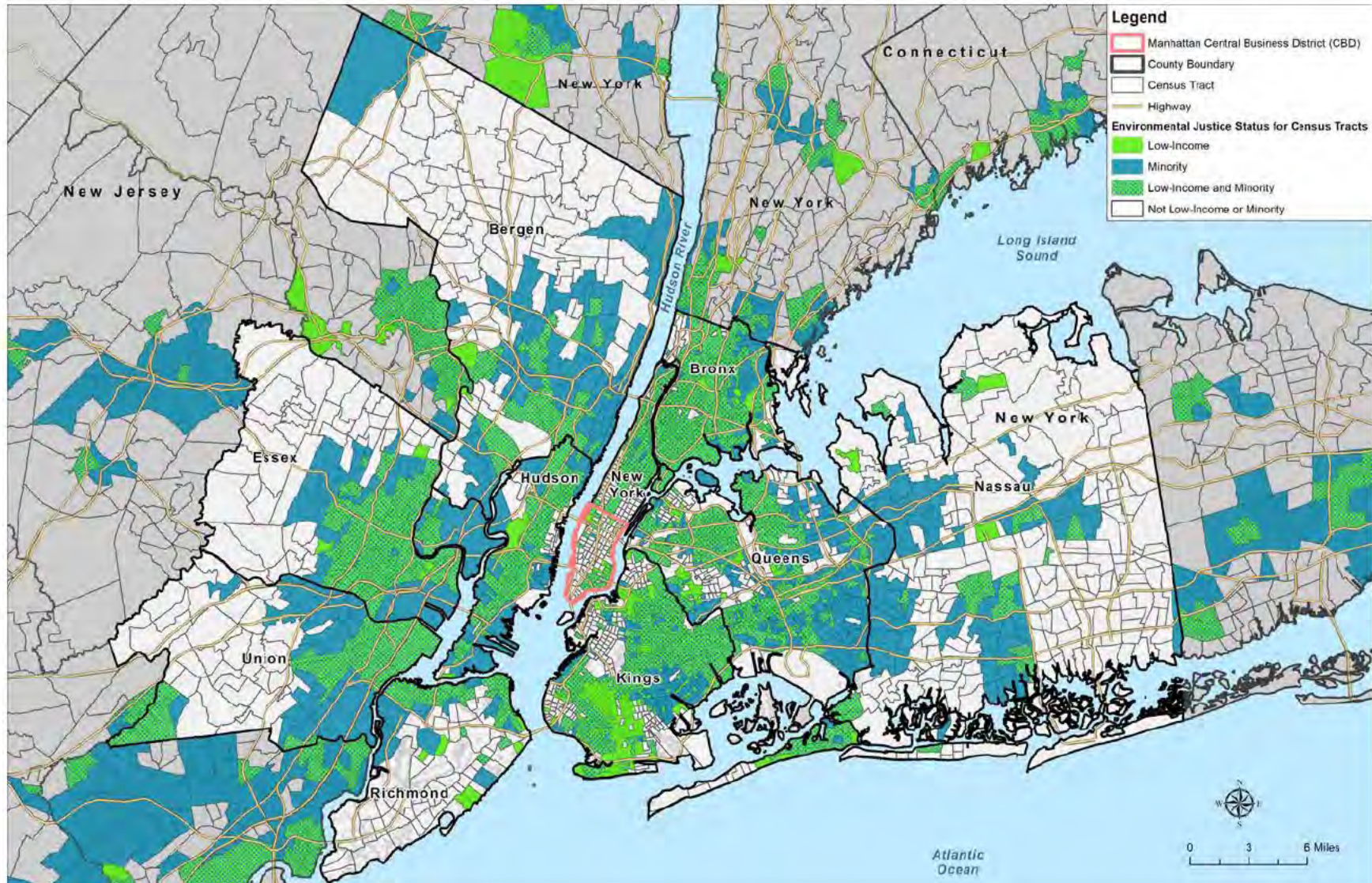
Figure 17D-1. Environmental Justice Census Tracts in the Manhattan CBD



Source: U.S. Census Bureau ACS 2015–2019 5-Year Estimates.

Note: For an audio description, please go to the following link: <https://youtu.be/VdJt3LrAFng>.

Figure 17D-2. Environmental Justice Census Tracts in the 10-County Environmental Justice Study Area



Source: U.S. Census Bureau ACS 2015–2019 5-Year Estimates.

Note: Areas in gray are non-environmental justice census tracts. For an audio description, please go to the following link: <https://youtu.be/F2veub1A24E>.

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17D-2. Effects of Traffic and Truck Traffic on Communities with Associated Air Pollutant and Health Burdens

As noted in **Chapter 17, “Environmental Justice,”** of the EA, a number of air pollutants are associated with adverse effects on human health. Studies have correlated certain air pollutants and poor air quality to asthma and other respiratory symptoms, cancer, diabetes, hypertension and heart disease, stroke, and low life expectancy.⁵ The USEPA has also identified toxic noise (which can, but does not always, increase with proximity to traffic) as a risk factor as it is associated with the release of stress hormones which, in turn, are associated with health conditions including disturbed sleep, hypertension, elevated heart rate and heart disease, and stroke. The USEPA has also identified toxic noise (which can, but does not always, increase with proximity to traffic) as a risk factor, as it is associated with the release of stress hormones which, in turn, are associated with health conditions including disturbed sleep, hypertension, elevated heart rate and heart disease, and stroke. **Appendix A, “Studies Linking Pollutants to Health Outcomes,”** provides a list of sources describing and/or assessing air pollutants and noise and their correlation to various illnesses and chronic conditions.

17D-2.1 AIR POLLUTANTS ASSOCIATED WITH TRAFFIC AND TRUCK TRAFFIC

Though air pollutants have many sources, vehicles produce air pollutants in several ways: (1) they generate brake and tire particulates; (2) they can disperse roadway dust into the surrounding air;⁶ and, most importantly, (3) they burn fossil fuels in their internal-combustion engines. As described in **Appendix 10A, “Description of Pollutants and MOVES Modeling Files (Electronic),”** Section 10A.1 of the EA, vehicles with combustion engines release:⁷

- Carbon monoxide
- Mobile source air toxics⁸
- Nitrogen oxides

⁵ New York City Department of Health and Mental Hygiene (NYC DOHMH). “Asthma”. Environment & Health Data Portal. <https://a816-dohbesp.nyc.gov/IndicatorPublic/beta/data-explorer/asthma/?id=2380#display=summary>; USEPA. EnviroAtlas Eco-Health Relationship Browser. https://enviroatlas.epa.gov/enviroatlas/Tools/EcoHealth_RelationshipBrowser/index.html; NYC DOHMH. 2018. “Mott Haven and Melrose.” Community Health Profiles 2018. <https://www.nyc.gov/assets/doh/downloads/pdf/data/2018chp-bx1.pdf>. p. 16.

⁶ USEPA. 2014. “Near Roadway Air Pollution and Health: Frequently Asked Questions.” [US]EPA-420-F-14-044. August. <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NFFD.PDF?Dockey=P100NFFD.PDF>. p. 1.

⁸ Both lead and sulfur dioxide emissions from on-road mobile sources have substantially decreased due to the Federally mandated switch to lead free gasoline and ultra-low sulfur diesel fuel, and so are not listed here.

⁸ As defined by USEPA, air toxics, often referred to as hazardous air pollutants (HAPs), are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. [US]EPA regulates 187 chemicals under its HAP program (USEPA, 2009d). Most air toxics originate from transportation and industry, including motor vehicles, industrial facilities, and power plants. USEPA. EJSCREEN Environmental Justice Mapping and Screening Tool: EJSCREEN Technical Documentation. September 2019. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf.

- Particulate matter smaller than or equal to, 10 microns (PM₁₀) or 2.5 microns (PM_{2.5}) in size^{9, 10}

Although all motor vehicles produce air pollutants, emissions from trucks are of particular concern to near-road air quality because they are predominantly powered by diesel fuel. Exhaust from diesel engines contains a mixture of gases and solid particles, broadly referred to as diesel particulate matter, that contains toxic compounds which can be harmful to peoples' health.^{11, 12}

As diesel-powered trucks emit more of certain pollutants per vehicle than other motor vehicles, they disproportionately contribute more emissions.^{13, 14} Indeed, concerns about Project-generated increases in truck traffic in environmental justice communities were specifically raised during early outreach efforts and by commenters on the EA. Thus, discussion of the Project-related effects of traffic presented throughout this Technical Memorandum focuses first on truck traffic diversions, but also identifies potential diversionary effects for non-truck traffic on highways where truck diversions would not occur.

More details on pollutants of concern and their associated health effects can be found in **Appendix 10A, "Description of Pollutants and MOVES Modeling Files (Electronic)," Section 10A.1** of the EA and on the USEPA's website: <https://www.epa.gov/pm-pollution>.

17D-2.2 POPULATIONS AT HIGHER RISK FOR HEALTH EFFECTS ASSOCIATED WITH AIR POLLUTANTS

According to the USEPA, certain populations could be more at risk from the health effects of particle pollution as a result of pre-existing conditions, lifestage (i.e., infants, children, pregnant women, older adults), and socioeconomic status. For this reason, sensitive receptors that contain high percentages of these populations (e.g., hospitals, schools, daycare facilities, elder-care facilities) are of specific concern

⁹ According to the NYC DOHMH, building boilers, used for heating, are responsible for half of all PM_{2.5} emissions in the city; approximately 17 percent comes from traffic; source: NYC DOHMH. 2019. "Breathe easy: NYC's air quality is improving" Oct. 24. <https://a816-dohbesp.nyc.gov/IndicatorPublic/beta/data-stories/breatheeasy/>.

¹⁰ According to USEPA, "the size of particles is directly linked to their potential for causing health problems. Small particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into your lungs, and some may even get into your bloodstream. People with heart or lung diseases, children, and older adults are the most likely to be affected by particle pollution exposure." USEPA. "Health and Environmental Effects of Particulate Matter (PM)." Accessed on October 21, 2022. <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm#:~:text=Environmental%20Effects%201%20Visibility%20impairment%20Fine%20particles%20%28PM,ground%20or%20water.%20...%203%20Materials%20damage%20>.

¹¹ USEPA. 2021. "Diesel Particulate Matter (PM) Air Toxics." EnviroAtlas National Data Fact Sheet. January. <https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/Supplemental/DieselPMairtoxics.pdf>.

¹² According to USEPA, exposure to diesel exhaust can lead to health conditions like asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. These conditions, in turn, can result in increased numbers of emergency room visits, hospital admissions, absences from work and school, and premature deaths.

¹³ USEPA. 2014. "Near Roadway Air Pollution and Health: Frequently Asked Questions." [US]EPA-420-F-14-044. August. <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NFFD.PDF?Dockey=P100NFFD.PDF>. p. 3.

¹⁴ Lattanzio, Richard. 2022. Heavy Duty Vehicles, Air Pollution, and Climate Change. Report IF12043. Washington, DC: Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IF/IF12043>.

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with regard to exposure to diesel emissions.¹⁵ A brief discussion of each of the sensitive populations follows:¹⁶

- **Pre-existing conditions:** individuals with pre-existing diseases could be more susceptible to pollutants since pre-existing medical conditions can directly influence the underlying processes involved in the response of an individual to a contaminant condition by making an individual less resistant to infection.
- **Children:** children can be exposed to some chemicals at higher rates or higher concentrations than adults because they consume more of certain foods and water per unit of body weight, have a higher ratio of body surface area to volume, and have different activity patterns. Because some chemicals accumulate differently in human breast milk, infants who are breastfed may also be exposed to pollutants in ways different than adults or even older children. Both infants and children may not have fully developed defense mechanisms against microbial and chemical contaminants.
- **Pregnant Women:** during pregnancy, changes in the endocrine system and metabolism may influence the body's response to a toxic substance. Additionally, fetuses may be at increased risk if exposure to a toxin occurs during critical developmental stages.
- **Older Adults:** older adults may be more affected by exposures to certain environmental agents because of physiological differences associated with age (e.g., organ systems become less effective at detoxification). Furthermore, older adults may be less able to mount an effective defense against contaminants because of a weakened immune system or pre-existing disease.
- **Socioeconomic Status:** factors related to socioeconomic status (e.g., income, level of education, occupation) may also have indirect effects on environmental exposures and health outcomes, as people with low incomes may not have the same access to health care as those in higher income groups and may bear greater exposure and disease burdens associated with where they live, work, or play that can increase their risk of adverse health effects from environmental hazards.

¹⁵ For example, across the 10-county environmental justice study area, there are over 3,900 private and public schools based on data from the National Center for Education Statistics and the National Center for Education Statistics. Data on sensitive receptor locations and consultation with the CBD Tolling Program Environmental Justice Community Group would be used to inform the implementation of place-based mitigation measures as described in **Section 17D-7.2** of this Technical Memorandum.

¹⁶ More information can be found on USEPA's website: <https://www.epa.gov/expobox/exposure-assessment-tools-lifestages-and-populations>.

17D-2.3 PROXIMITY TO TRAFFIC

In identifying the effects of increased traffic on potentially vulnerable communities, both the type of roadways and the distance from roadways are factors. Concentrations of air pollutants and their effects on individuals are more severe near major roads that are heavily traveled or have substantial truck traffic.¹⁷

Further, researchers have found that the effects on individuals from exposure to roadway pollution are most common within 300 meters (approximately 1,000 feet) of such roadways.¹⁸ USEPA notes that the highest concentrations of roadway pollutants occur on or just downwind of a roadway; with greater distance from a roadway, concentrations of roadway-related pollutants generally decrease to background levels within approximately 150 to 180 meters (500 to 600 feet).¹⁹ USEPA further notes that:

Residential proximity to traffic has been associated with various health impacts, particularly asthma exacerbation and possibly onset of asthma, as well as mortality rates (Baumann et al., 2011; Health Effects Institute, 2010). Proximity to traffic has also been associated with subclinical atherosclerosis (a key pathology underlying cardiovascular disease (CVD)), prevalence of CVD and coronary heart disease (CHD), incidence of myocardial infarction, and CVD mortality (Hoffman et al., 2009).²⁰

In recognition of the potential risks, some state and local policies restrict new construction near major roads.²¹ In the Project's study area, however, residential and other sensitive uses preceded development of the roadways in many locations.

¹⁷ USEPA, Office of Transportation and Air Quality. Near Roadway Air Pollution and Health: Frequently Asked Questions, [US]EPA-420-F-14-044, August 2014. <http://nepis.epa.gov/Exe/ZyPDF.cgi/P100NFFD.PDF?Dockey=P100NFFD.PDF>.

¹⁸ Samuels, Gabe and Yonah Freemark. The Polluted Life Near the Highway: A Review of National Scholarship and a Louisville Case Study. Urban Institute, November 2022. <https://www.urban.org/sites/default/files/2022-11/The%20Polluted%20Life%20Near%20the%20Highway.pdf>.

¹⁹ USEPA, Office of Transportation and Air Quality. Frequently Asked Questions: Near Roadway Air Pollution and Health: Frequently Asked Questions, [US]EPA-420-F-14-044, August 2014. <http://nepis.epa.gov/Exe/ZyPDF.cgi/P100NFFD.PDF?Dockey=P100NFFD.PDF>.

²⁰ USEPA. 2019. EJSCREEN Technical Documentation. September. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf.

²¹ See, for example, California Senate Bill No. 352, Chapter 668 (October 03, 2003).

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17D-3. Past, Present, and Reasonably Foreseeable Actions Influencing Pollutant and Chronic-Disease Burdens

17D-3.1 PAST LAND-USE AND TRANSPORTATION PRACTICES, AND HOW THESE HAVE CONTRIBUTED TO POLLUTANT BURDENS

The New York metropolitan region's transportation system, including its ports, waterways, railroads, and highways, has had a lasting effect on development of the area. For many years, port uses, manufacturing, and wholesale markets dominated waterfront sections of Manhattan, Brooklyn, Queens, and the Bronx, where affordable housing for the workers was also co-located. In some areas, New York City developed public housing to replace tenement blocks, and in doing so, created permanent enclaves of affordable units on large blocks covering large sections of certain neighborhoods (i.e., East Harlem, Lower East Side, Red Hook, Downtown Brooklyn, Williamsburg, Long Island City, Upper Manhattan, and the South Bronx).^{22, 23} Similarly, in New Jersey, from the 19th Century to about the middle of the 20th Century, railroads dominated the waterfront with large terminals and yards in Hoboken and Jersey City. Adjacent neighborhoods housed workers from that industry until the latter half of the 20th Century, when large tracts of land became abandoned or underused as railroad operations declined.

The region's highway network was developed in the mid-20th Century. In many cases, highway construction cut through apartment blocks, displacing residents and businesses. In other cases, highways formed physical boundaries between neighborhoods, isolating residents from commercial centers and from their former neighbors as was the case with construction of the Cross Bronx Expressway. Over time, many neighborhoods adjacent to highways experienced an exodus of residents who were replaced by new ethnic or economic groups, leading to marked neighborhood change in some places, and the new residents established new ethnic enclaves (e.g., Puerto Rican settlement of East Harlem and the South Bronx).²⁴ Because many of these newly established residential populations were largely minority and/or low-income, today many neighborhoods adjacent to highways are identified as environmental justice communities.^{25 26}

²² Jackson, Kenneth T, New-York Historical Society, and Proquest Firm. 2010. The Encyclopedia of New York City. New Haven: Yale University Press.

²³ Mahler, Jonathan. 2012. "How the Coastline Became a Place to Put the Poor." The New York Times, December 4, 2012, sec. New York. <https://www.nytimes.com/2012/12/04/nyregion/how-new-york-citys-coastline-became-home-to-the-poor.html?searchResultPosition=1>.

²⁴ Grace Brennan, Park on the Highway: Building a Cap Park as a Solution to Decades of Devastation Caused by the Construction of the Cross-Bronx Expressway, 49 Fordham Urb. L.J. 825 (2022). <https://ir.lawnet.fordham.edu/ulj/vol49/iss4/4>.

²⁵ Sooyoung Kim, Zafar Zafari, Martine Bellanger, and Peter Alexander Muennig, 2018. "Cost-Effectiveness of Capping Freeways for Use as Parks: The New York Cross Bronx Expressway Case Study." American Journal of Public Health 108. P. 379-384. <https://doi.org/10.2105/AJPH.2017.304243>.

²⁶ Sooyoung Kim, Zafar Zafari, Martine Bellanger, and Peter Alexander Muennig, 2018. "Cost-Effectiveness of Capping Freeways for Use as Parks: The New York Cross Bronx Expressway Case Study." American Journal of Public Health 108. P. 379-384. <https://doi.org/10.2105/AJPH.2017.304243>.

Beyond land use and transportation practices, other policies and practices have contributed to or amplified these effects. For example, in some areas, discriminatory real estate practices such as redlining severely restricted where minority populations could locate, concentrating minority communities in certain areas.²⁷

17D-3.2 HISTORICAL, CURRENT, AND ANTICIPATED TRENDS IN POLLUTANT EMISSIONS

New York City's air quality has been improving in many ways since 1990; indeed, the City has experienced substantial declines in the annual average of USEPA's criteria pollutants since 1990.²⁸ Regulatory monitoring by New York State Department of Environmental Conservation (NYSDEC) shows a decrease of over 80 percent in sulfur dioxide (SO₂) and a roughly 65 percent reduction in nitrogen dioxide (NO₂) since 2000. The region has also seen reductions in the levels of fine particulate matter (PM_{2.5}), while ozone (O₃) levels have remained steady. The New York City region was found to be in nonattainment of the 1997 annual and 2006 24-hour PM_{2.5} NAAQS of 15 µg/m³ and 35 µg/m³, respectively. In recognition that the region had improved to the point of meeting air quality standards for this pollutant, the area was reclassified as a maintenance area for these standards in 2014. The region is now classified as an attainment area for the more stringent 2012 PM_{2.5} annual standard of 12 µg/m³.

The New York City Community Air Survey (NYCCAS), a neighborhood level air quality monitoring network run by the New York City Department of Health, has also tracked similar improvements since the first year of monitoring in 2009. Between 2009 and 2019, individual New York City neighborhoods experienced declines in pollutant levels between 22 and 42 percent for PM_{2.5} (**Figure 17D-3**), and between 20 and 40 percent for NO₂, while SO₂ decreased by 98 percent citywide. Improvements in air quality can be attributed to local policies and regulations, including the City's effort to phase out residual heating oil, as well as New York State regulations reducing the sulfur content of heating oil and more stringent Federal fuel standards for vehicles and emissions standards for power plants. Also, there is evidence of reduced PM_{2.5} from residual oil burning, marine vessels, and motor vehicle exhaust. Policies targeting sulfur, NOx, and PM_{2.5} emissions have reduced the air quality impacts of both local and regional sources.²⁹

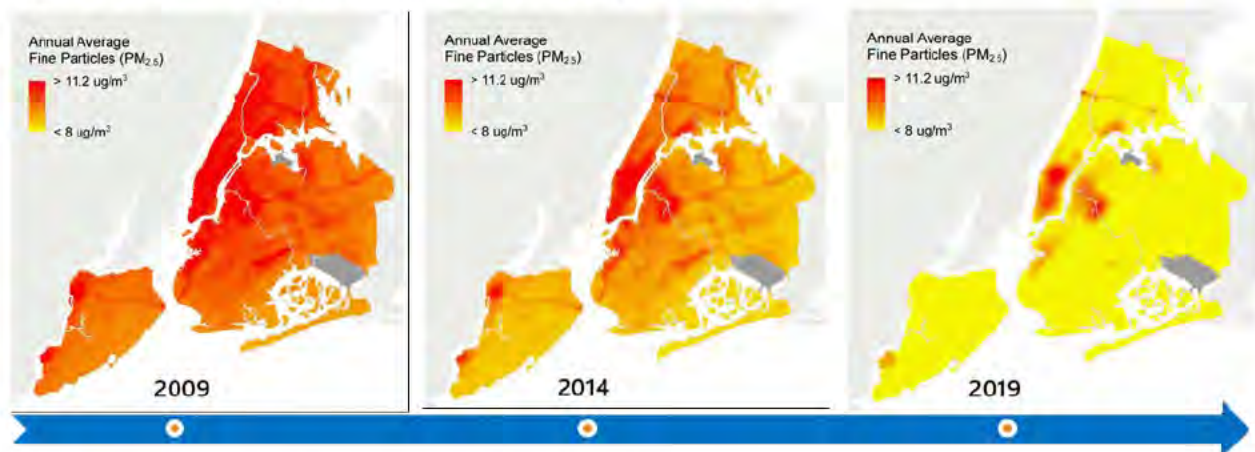
²⁷ Negret, Marcel, and Carlos Mandeville. 2020. "Housing Segregation Is a Choice." Regional Plan Association. August 21, 2020. <https://rpa.org/latest/lab/housing-segregation-is-a-choice>.

²⁸ USEPA, OAR. 2022. "Air Quality - Cities and Counties | USEPA." USEPA. June 1, 2022. <https://www.epa.gov/air-trends/air-quality-cities-and-counties>.

²⁹ Pitiranggona, Masha, et al. "Long-term trends in local and transported PM_{2.5} pollution in New York City." Atmospheric Environment, Volume 248. March 1, 2021. Accessed on November 8, 2022, at <https://doi.org/10.1016/j.atmosenv.2021.118238>.

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Figure 17D-3. PM_{2.5} Trends in New York City (2009 to 2019)

Source: <https://nyccas.cityofnewyork.us/nyccas2021v9/report/2>.

The effects of New York City's policies and other regional and local initiatives and regulations for improving air quality can also be seen in neighboring jurisdictions. Air quality monitoring data, as report in USEPA's AirData database, show declining PM_{2.5} levels for Hudson, Bergen and Suffolk Counties from 2009 to 2019.³⁰ Indeed, over the past 10 years, PM_{2.5} levels have been below both the 24-hour and annual standards (35 µg/m³ and 12 µg/m³, respectively).³¹ Furthermore, although there are annual variations, the data show an overall improvement in PM_{2.5}.³²

These data are further supplemented by data from both the New York State Department of Health's (NYSDOH) Air Pollution Tracker, and the New Jersey Department of Environmental Protection's (NJDEP) Air Toxic Trend Tracker. The NYSDOH's Air Pollution Tracker shows declines in the average concentration of PM_{2.5} levels to below the 24-hour and annual standards of 35 µg/m³ and 12 µg/m³, respectively, from 2000-2017 in Suffolk County, and from 2000-2011 in Nassau County.^{33, 34} The NJDEP Air Toxic Trend Tracker also shows substantial declines in average (ug/m³) concentrations of the mobile air toxics benzene and 1,3-Butadiene in Union County from 2001 to 2020, further exhibiting improvements in the region's overall air quality in recent decades (Figure 17D-4).³⁵

³⁰ The New York State Department of Environmental Conservation (NYSDEC) does not have a Nassau County Particulate Matter monitor. As such, no particulate matter data are reported for Nassau County in USEPA's AirData database.

³¹ Data reported by USEPA differs from New York City Community Air Survey (NYCCAS) data in collection methods, sampling and certification.

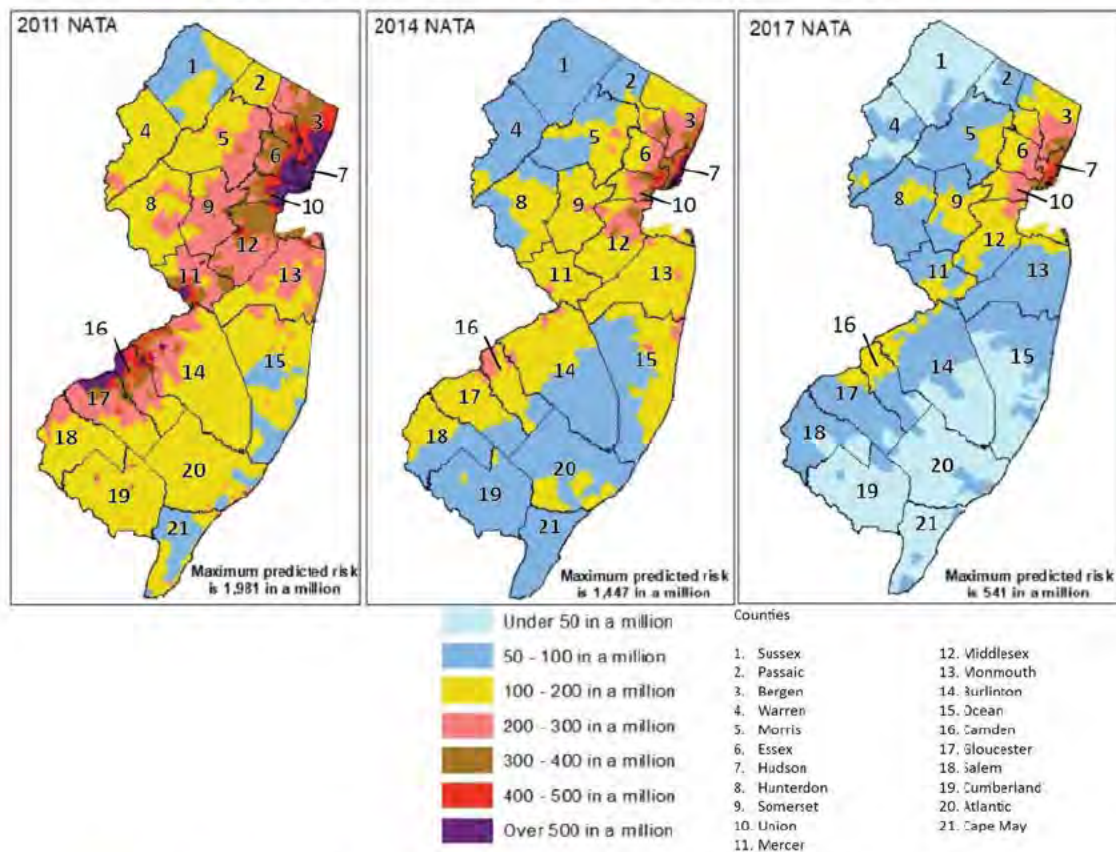
³² Several locations (East Farmingdale Water Dist., 72 Gazza Blvd.; Engine 5/Ladder 6, 355 Newark Avenue; 320 Main Street). (2019). Monitored USEPA data for PM_{2.5}, the primary pollutant of concern from diesel emissions, for Hudson, Bergen, and Suffolk Counties. Suffolk County, Jersey City, and Fort Lee, respectively.

³³ 2011 and 2017 were the last years that the NYS DOH collected PM_{2.5} data for Nassau and Suffolk Counties, respectively.

³⁴ Air Pollution. Environmental public health tracker – New York State Department of Health (NYSDOH). (n.d.). Retrieved December 16, 2022, https://apps.health.ny.gov/statistics/environmental/public_health_tracking/tracker/index.html#/airpollutionCountyTrend.

³⁵ Air Toxics Trends. New Jersey Department of Environmental Protection (NJDEP) | Air Quality, Energy and Sustainability (AQES) | Air Monitoring | Air Toxic Trends. (2022, September 1). Retrieved December 16, 2022, from <https://www.state.nj.us/dep/airmon/air-toxics.html>.

Figure 17D-4. Diesel Particulate Risk Trends in New Jersey (2011 to 2017)



Source: New Jersey Department of Environmental Protection (NJDEP). 2022. NJDEP: Air Toxics. Air Toxics. <https://dep.nj.gov/airplanning/airtoxics/>

Recognizing that diesel emissions from trucks and buses are of particular concern as a source of particulate matter, a number of Federal, state, and local initiatives have been developed and implemented to reduce air pollution from vehicular emissions as well as other sources. Some notable laws and programs to reduce particulate matter emissions in New York City and the region include the following:

- **MTA's Zero-emissions Program.**³⁶ This program advances air quality goals at the state level through investments in zero-emissions buses, upgrades to MTA facilities to accommodate the zero-emissions buses, and modifications to workforce practices and policies to support these changes.
- **USEPA final emissions standards for heavy-duty vehicles.**³⁷ The more stringent standards for trucks, beginning with model year 2027 will substantially reduce emissions of NOx from heavy-duty gasoline and diesel engines.

³⁶ New York City Transit and Metropolitan Transportation Authority (MTA) Bus Company. MTA Zero-Emission Bus Transition Plan. May 2022. Accessed on November 8, 2022, at <https://new.mta.info/document/91336>.

³⁷ USEPA. 2022. Final EPA Standards for Heavy-Duty Vehicles to Slash Dangerous Pollution and Take Key Step Toward Accelerating Zero-Emissions Future. December 20. <https://www.epa.gov/newsreleases/final-epa-standards-heavy-duty-vehicles-slash-dangerous-pollution-and-take-key-step>.

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17D-4. Existing Traffic Proximity

Notwithstanding the progress in reducing pollutant emissions, the region's history of land-use and transportation development is still felt today by residents living near roadway traffic.

Multiple environmental justice screening tools, such as CDC's Environmental Justice Index (EJI), USEPA's EJScreen, and the White House Council on Environmental Quality's (CEQ) Climate and Economic Justice Screening Tool (CEJST) include measures of exposure to traffic. EJScreen's "traffic proximity" environmental indicator is equal to the count of all classes of vehicles per day (also known as average annual daily traffic, or "AADT") on major roadways within 500 meters (approximately 1,600 feet) of a census block centroid, divided by distance in meters.³⁸ Dividing the vehicle count by distance accounts for the fact that pollutants and noise from traffic are greater when closer to the roadway. For geographies larger than a census block, the distances are presented as a population-weighted average of all the blocks in the larger geography since people are not evenly distributed across a block group, tract, or larger area.³⁹

As with other environmental justice screening tools, EJScreen's environmental indicator for traffic proximity is presented both as a magnitude and a percentile value so that users can identify places in the United States with the greatest pollutant burdens. For example, any census tract having a traffic proximity indicator with a national percentile value of 50 or more means that the burden for traffic proximity is greater than or equal to half of all census tracts in the United States. Because USEPA's EJScreen indices are, on average, higher in the 28-county region and in the 10-county environmental justice study area than in the nation overall, a local comparison could potentially suppress populations that are more highly burdened relative to communities nationwide from being considered in the analysis. Therefore, this Technical Memorandum refers to the national percentiles.

³⁸ EJScreen provides three types of indices for describing air toxics, diesel particulate matter, and PM_{2.5} burdens: 1) environmental indicators, which describe pollutant levels or health risk; 2) environmental justice indices, which combine environmental indicators with racial and income data; and 3) supplemental indices, which combine environmental indicators with income, English-proficiency, education, employment, and life-expectancy data. The Project Sponsors used EJScreen's environmental indicator for the analysis presented here since income and minority status were already considered when designating tracts as environmental justice communities for the EA and this analysis as well, as described in **Section 17D-1**, above. Note that some USEPA publications refer to the EJScreen program in capital letters (i.e., "EJSCREEN") while others refer to it as "EJScreen." In this document, the Project Sponsors refer to it as EJScreen unless referring to the title of a document in which it appears in all-capital letters. Refer to USEPA. EJSCREEN Environmental Justice Mapping and Screening Tool: EJSCREEN Technical Documentation. September 2019. https://19january2021snapshot.epa.gov/sites/static/files/2017-09/documents/2017_ejscreen_technical_document.pdf, and USEPA. 2022. EJScreen Technical Documentation. October. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf. Note that while EJScreen uses 500 meters, much of the literature on this topic suggests that beyond 200-300 meters, the pollutants begin to mirror ambient air quality levels. Further, some have demonstrated that the pollution is more likely to persist within 300 meters. See, for example, Gabe Samuels and Yonah Freemark. "The Polluted Life Near the Highway: A Review of National Scholarship and a Louisville Case Study." Urban Institute. (November 2022). <https://www.urban.org/sites/default/files/2022-11/The%20Polluted%20Life%20Near%20the%20Highway.pdf>.

³⁹ Refer to USEPA. 2019. EJSCREEN Technical Documentation. September. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf, pp. 48-52, 97-100. EJScreen obtains traffic data from FHWA's Highway Performance Monitoring System, which includes interstates, highways, parkways, principal arterials and minor arterials in urban areas.

Figure 17D-5 depicts current traffic proximity in environmental justice census tracts within the 10-county environmental justice study area with a residential population of one or more.⁴⁰ Traffic proximity is higher along many of the region's interstate highways, such as the Cross Bronx, Major Deegan, and Bruckner Expressways in Bronx County; the Long Island Expressway in Queens and Nassau Counties; the Van Wyck Expressway and Belt Parkway in Queens County; the Staten Island Expressway in Richmond County; the Belt Parkway and Brooklyn Queens Expressway in Kings County; the Garden State Parkway and Interstate 280 in Essex County; the New Jersey Turnpike in Essex and Bergen Counties; the approaches to the Holland and Lincoln Tunnels in Hudson County; and arterial streets, like Ocean Parkway and Linden Boulevard in Kings County as well as Teaneck Road in Bergen County.

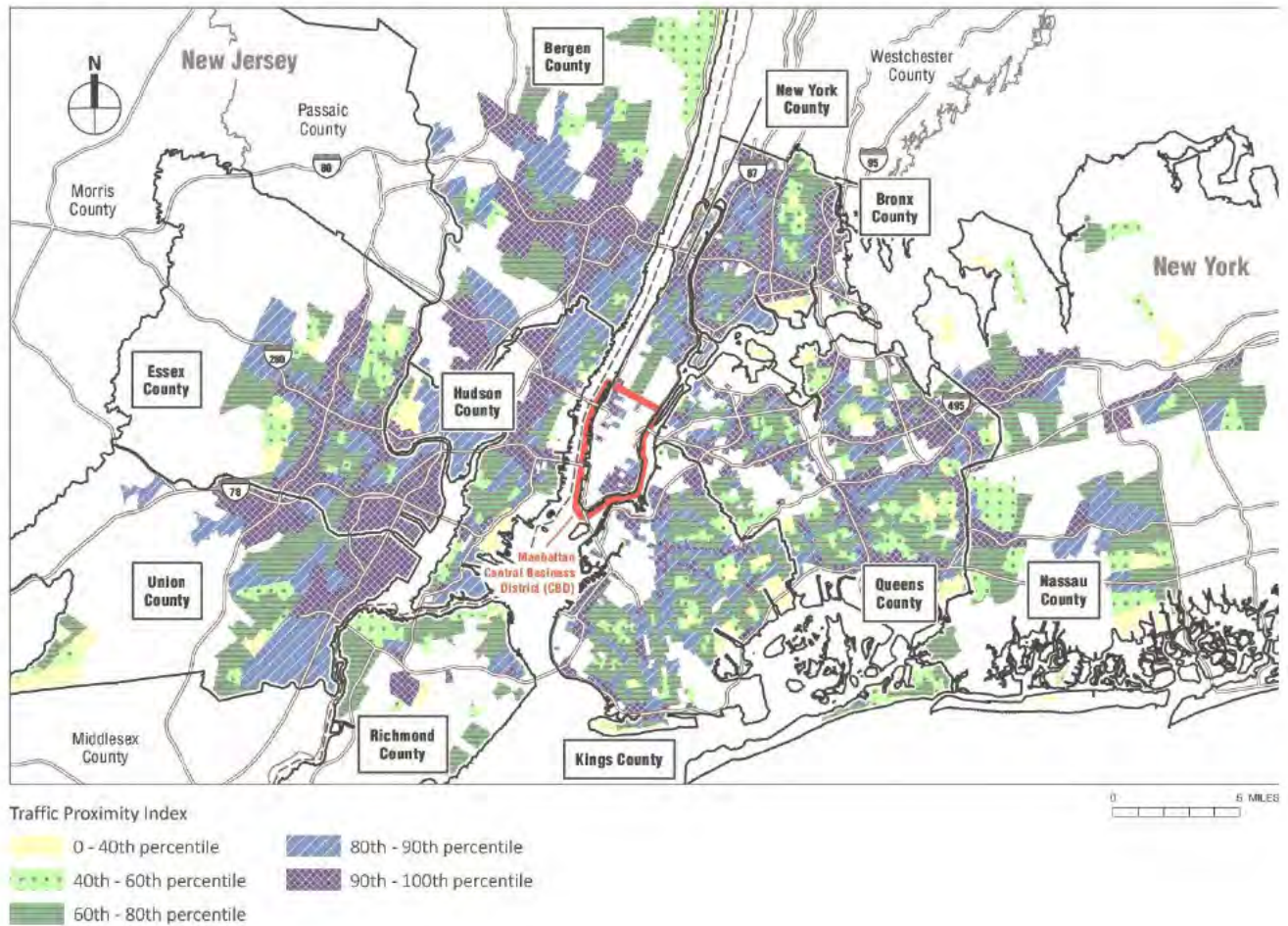
Across the environmental justice census tracts in the 10-county environmental justice study area, the mean national percentile is 77.1, meaning that the average individual living in the study area's environmental justice tracts is closer to more daily traffic than 77 percent of US residents. However, within the study area there is a large range, with some environmental justice tracts as low as the 3.7th percentile and others as high as the 99.9th percentile for traffic proximity.

⁴⁰ The Project Sponsors are presenting data at the census tract level as published by USEPA. Though EJScreen makes its data available for blocks and block groups in addition to tract, the Project Sponsors used tract-level data for comparability to other data referred to in this document which is not available at the block or block group level. The census tract is the smallest geography available for CDC EJ data. The BPM, which is the source of potential traffic change data for the Project, uses tracts as the smallest unit of geography as well. Finally, according to USEPA: "EJScreen relies on demographic and environmental estimates that involve substantial uncertainty. This is especially true when looking at a small geographic area, such as a single Census block group.... Therefore, it is typically very useful and advisable to summarize EJScreen data within a larger area that may cover several block groups...." USEPA further notes that, unlike other indicators, EJScreen's environmental indicators for air quality, including particulate matter and air toxics, "were obtained for each Census tract, so each block group in a tract was assigned the same environmental indicator value, as described in the Technical Documentation." For more information, see USEPA. 2022. Limitations and Caveats in Using EJScreen. <https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen>

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Figure 17D-5. Existing Traffic Proximity in Environmental Justice Census Tracts



Source: EJScreen 2021 data.

Note: Percentiles are national.

17D-5. Pre-Existing Pollutant and Health Burdens in the Study Area

This section describes pre-existing pollutant and chronic disease burdens for the 10-county environmental justice study area. The Project Sponsors gathered data from national sources on pre-existing pollutant and chronic disease burdens that are cited in multiple environmental justice screening tools. Data describing pre-existing chronic disease burdens from state and local health departments provide additional indicators not found in the national datasets.

17D-5.1 INDICATORS OF POLLUTANT BURDENS

Comments from the USEPA on the CBD Tolling Program EA focused on Project-induced changes in traffic, and in particular truck trips, because of the association between truck emissions and health. Consistent with USEPA's comments, the Project Sponsors gathered three measures sourced from USEPA's National Air Toxics Assessment (NATA) that describe the burdens from pollutants that are influenced by mobile source emissions:

- Air Toxics Cancer Risk, or the estimated lifetime inhalation cancer risk from the analyzed carcinogens in ambient outdoor air, expressed as the chance, in one million, of developing cancer from inhalation of air toxics.⁴¹
- Air Toxics Respiratory Hazard Risk, which is the exposure to air toxics relative to the amount of those toxics at which health effects would be expected, expressed as a number between 0 and 1, where 1 indicates a level of exposure that would be expected to cause negative health effects.⁴²
- Diesel Particulate Matter, expressed as concentration in the air in units of μg per cubic meter.⁴³

The Project Sponsors also gathered data on the burden of $\text{PM}_{2.5}$ sourced from USEPA's Agency Air Quality System, which uses a combination of data from air-quality monitors and models to provide the concentration of $\text{PM}_{2.5}$ in the air in units of μg per cubic meter.⁴⁴

⁴¹ Note that this air toxics measure is based on all sources of air toxics, not just mobile sources, such as on-road vehicles. USEPA. 2022. 2014 NATA: Assessment Results. <https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results>; CDC and Agency for Toxic Substances Disease Registry. Technical Documentation for the EJI 2022. <https://www.atsdr.cdc.gov/placeandhealth/eji/docs/EJI-2022-Documentation.pdf>.

⁴² Note that this air toxics measure is based on all sources of air toxics, not just mobile sources, such as on-road vehicles. USEPA. 2022. 2014 NATA: Assessment Results. <https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results>; USEPA. Overview of Environmental Indicators in EJScreen. <https://www.epa.gov/ejscreen/overview-environmental-indicators-ejscreen>.

⁴³ USEPA. Overview of Environmental Indicators in EJScreen. <https://www.epa.gov/ejscreen/overview-environmental-indicators-ejscreen>; CDC and Agency for Toxic Substances Disease Registry. Technical Documentation for the EJI 2022. <https://www.atsdr.cdc.gov/placeandhealth/eji/docs/EJI-2022-Documentation.pdf>.

⁴⁴ Ibid.

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Though multiple environmental justice screening tools include these measures, the Project Sponsors obtained these data on pollutant burdens from the environmental indicators published in USEPA's 2021 EJScreen dataset.⁴⁵

17D-5.2 PRE-EXISTING POLLUTANT BURDENS IN THE 10-COUNTY ENVIRONMENTAL JUSTICE STUDY AREA

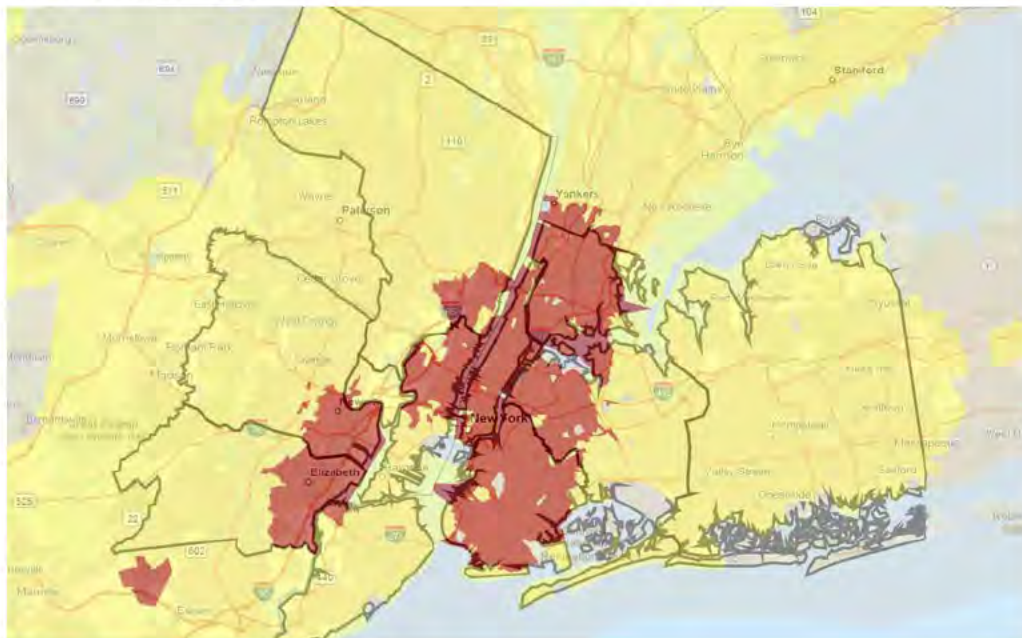
The people of the 10-county study region—whether they live in communities designated as environmental justice communities or in other communities—are burdened with high levels of air toxics cancer risk, air toxics respiratory hazards risk, and diesel particulate matter levels, when compared to the rest of the United States. **Figure 17D-6** depicts air toxics cancer risk and air toxics respiratory hazards index for the region, including communities designated as environmental justice communities and those which are not. Individuals in the Manhattan CBD and nearly all of Bronx, Kings, and Queens Counties, New York are exposed to air toxics cancer risk worse than 94 percent of the nation, as are those in Hudson, southeast Bergen, and large sections of Essex and Union Counties in New Jersey. Air toxics respiratory hazards are worse than in 94 percent of the nation's communities across even more of Bergen, Hudson, Essex, and Union Counties, as well as more of Nassau County. The other portions of the 10-county environmental justice study area have air toxics cancer risk and respiratory hazards at or above the 80th percentile of all US communities.

Figure 17D-7 depicts levels of diesel particulate matter and PM_{2.5} in the region's air. The diesel particulate matter levels, compared to those around the United States, are at or above the 80th percentile in nearly every part of the 10-county region, with levels at or above the 95th percentile across almost all of New York City, nearly all of Hudson County, New Jersey and large portions of Union, Essex, and Bergen Counties. As mentioned in **Section 17D-3.2** of this Technical Memorandum, PM_{2.5} levels in region have improved in recent years, and no community in the 10-county environmental justice study area has levels that exceed the 80th percentile.

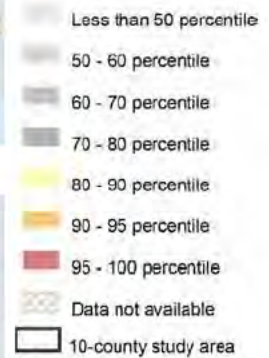
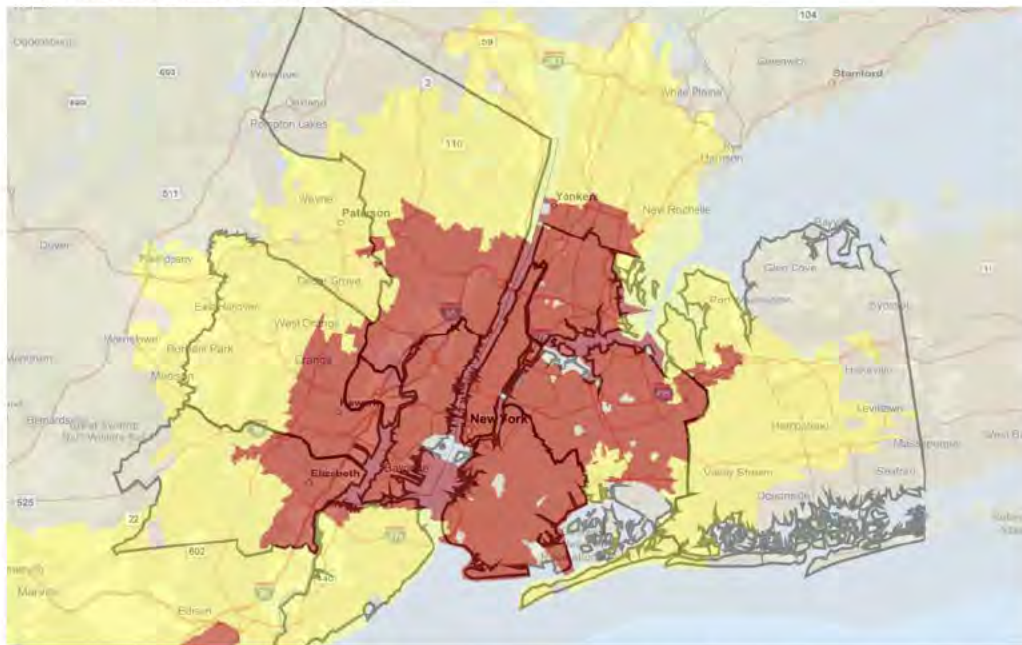
⁴⁵ EJScreen provides three types of indices for describing air toxics, diesel particulate matter, and PM_{2.5} burdens: 1) environmental indicators, which describe pollutant levels or health risk; 2) environmental justice indices, which combine environmental indicators with racial and income data; and 3) supplemental indices, which combine environmental indicators with income, English-proficiency, education, employment, and life-expectancy data. The Project Sponsors used EJScreen's environmental indicator for the analysis presented here since income and minority status were already taken into account when designating tracts as environmental justice communities for the EA and this analysis as well, as described in **Section 17D-1**, above. Note that some USEPA publications refer to the EJScreen program in capital letters (i.e., "EJSCREEN") while others refer to it as "EJScreen." In this document, the Project Sponsors refer to it as EJScreen unless referring to the title of a document in which it appears in all-capital letters. Refer to USEPA. EJSCREEN Environmental Justice Mapping and Screening Tool: EJSCREEN Technical Documentation. September 2019. https://19january2021snapshot.epa.gov/sites/static/files/2017-09/documents/2017_ejscreen_technical_document.pdf, and USEPA. 2022. EJScreen Technical Documentation. October. https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf.

Figure 17D-6. Pre-Existing Air Toxics Cancer Risk and Respiratory Hazards Index Percentiles Across the 10-County Environmental Justice Study Area

Air Toxics Cancer Risk



Air Toxics Respiratory Hazards Index



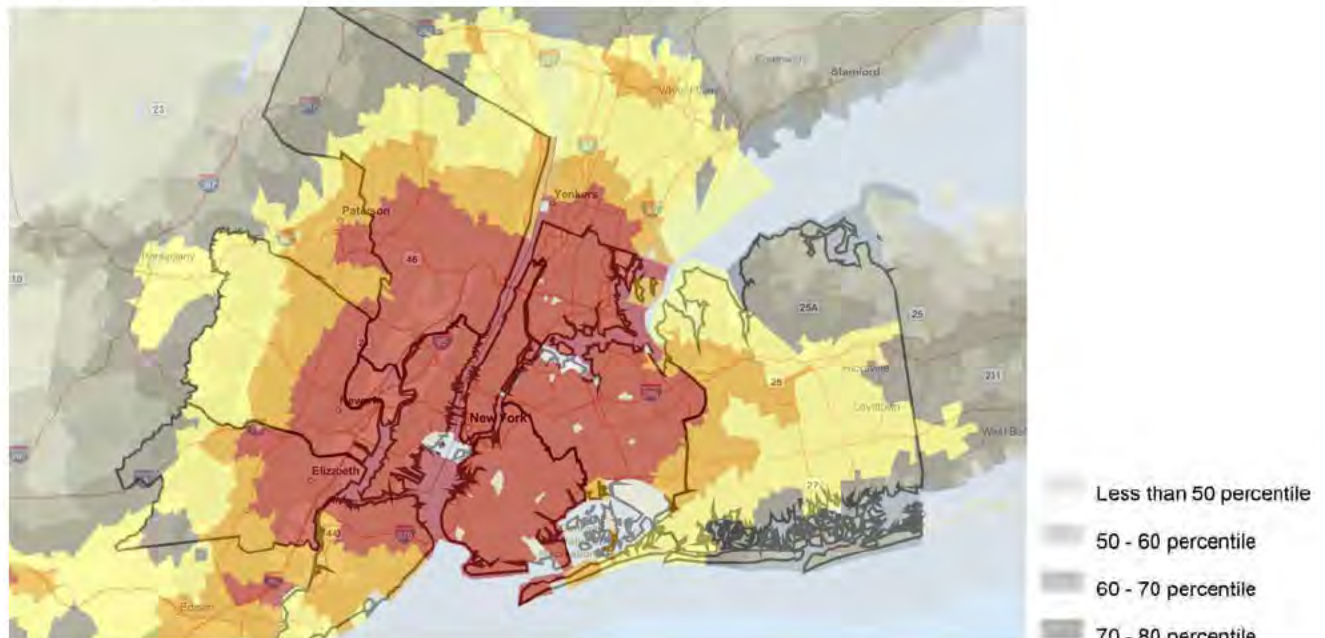
Source: U.S. Environmental Protection Agency's (USEPA) Environmental Justice Screening and Mapping Tool (Version 2.1).

Notes:

1. Percentiles are national; EJScreen's environmental indicators shown.
2. For an audio description, please go to the following link: <https://youtu.be/Z81EqRyluiM>.

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Figure 17D-7. Pre-Existing Diesel Particulate Matter and PM_{2.5} Percentiles Across the 10-County Environmental Justice Study Area**Diesel Particulate Matter****PM_{2.5}**

Source: USEPA's Environmental Justice Screening and Mapping Tool (Version 2.1).

Notes:

1. Percentiles are national; EJScreen's environmental indicators shown.
2. For an audio description, please go to the following link: https://youtu.be/b7P17F_EtYU.

17D-5.3 PRE-EXISTING POLLUTANT BURDENS IN ENVIRONMENTAL JUSTICE COMMUNITIES

The widespread pre-existing pollutant burdens are characteristic of the region as a whole. This analysis informs the environmental justice analysis in the EA and, therefore, focuses on the environmental justice communities; as noted above, the pollutant burdens described herein also exist in many non-environmental justice communities within the 10-county environmental justice study area. The population-weighted average national percentile for air toxics cancer risk, air toxics respiratory risk, and diesel particulate matter exposure in environmental justice census tracts exceeds 90, though the same figure for PM_{2.5} is 57.0. **Table 17D-1** summarizes these pollutant-burden measures for each of the 10 counties with the minimum and maximum percentile for any tract within that county as well as the population-weighted average. Maps in **Appendix B** depict the national percentiles for each pollutant across all environmental justice tracts.

Table 17D-1. Pre-Existing Air Toxics, Diesel Particulate Matter, and PM_{2.5} Burden Percentile Ranges in the 10-County Environmental Justice Study Area by County, Environmental Justice Communities

COUNTY	AIR TOXICS CANCER RISK			AIR TOXICS RESPIRATORY HAZARDS INDEX			DIESEL PARTICULATE MATTER			PM _{2.5}		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
New Jersey												
Bergen	84	87	98	48	92	95	63	97	98	31	66	71
Essex	84	88	98	82	92	99	91	96	99	55	60	65
Hudson	84	91	98	95	96	99	96	99	100	60	67	71
Union	84	91	100	48	88	99	75	94	98	43	55	61
New York												
Bronx	84	98	98	82	97	99	97	98	100	54	63	68
Kings (Brooklyn)	84	97	98	82	98	99	97	98	100	47	57	66
New York (Manhattan)	84	98	99	95	99	100	98	99	100	66	68	70
Queens	84	89	98	82	94	99	82	97	100	28	49	67
Richmond (Staten Island)	84	84	98	82	84	95	92	96	98	49	57	61
Nassau	32	81	84	48	74	95	69	88	96	18	31	45
10-COUNTY STUDY AREA	32	93	100	48	94	100	63	97	100	18	57	71

Source: EJScreen 2021 data.

Note: "Avg" refers to the population-weighted average percentile for the census tracts in each geography. The percentiles are national percentiles. Air toxics cancer risk and respiratory hazards index are based on all sources of air toxics, not just mobile sources, such as on-road vehicles. USEPA. 2022. 2014 NATA: Assessment Results.

<https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results>.

Notably, though higher in the center of the region and especially in the environmental justice tracts in the portions of Hudson and Bergen Counties between the George Washington Bridge and Lincoln Tunnel, none of the environmental justice census tracts within the 10-county environmental justice study area have PM_{2.5} burdens above the 71st percentile. However, relative diesel particulate matter burdens are high across the region.

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Values for air toxics cancer risk are some of the highest in the nation, with indices above the 95th national percentile across most or all environmental justice tracts in Bronx, Kings, New York, and the western half of Queens counties in New York, and a small portion of the north shore of Richmond County. The environmental justice tracts in the eastern portions of Union and Essex Counties are also above the 95th percentile, as are those in the northern half of Hudson County, and the southeast corner of Bergen County.

Air toxics respiratory hazards index percentiles are similarly high across the 10-county environmental justice study area's environmental justice tracts, with values above the 95th percentile in the geographic center. A few tracts in Glen Cove, Oyster Bay, and Hempstead, Nassau County are below the 50th percentile, as are tracts in central Plainfield, Union County.⁴⁶

17D-5.4 INDICATORS OF PRE-EXISTING CHRONIC DISEASE BURDENS

As with pollutant burdens, multiple environmental justice screening tools also provide data on pre-existing chronic disease burdens sourced from the CDC's PLACES program, which provides estimated data on pre-existing chronic disease for small geographies, such as counties, census tracts, and ZIP codes.⁴⁷ The Project Sponsors obtained CDC PLACES data at the smallest geography available (the census tract), from CDC's EJI tool.

Though EJScreen's online mapping tool and the CEJST have health measures included in their datasets, also sourced from the CDC's PLACES program, these tools are missing data for the state of New Jersey.⁴⁸ Therefore, the EJI tool was used to extract health data for this analysis.

EJI includes indicators for the prevalence of the following conditions (among adults) that have been associated in public health scholarship with exposure to pollutants that are generated by diesel trucks:

- High blood pressure
- Asthma
- Cancer (excluding skin cancer)
- Diabetes
- Poor mental health (14 or more days in the last 30 days during which mental health was not good, as self-reported)⁴⁹

As USEPA has done with EJScreen, CDC presents these data both as rates of prevalence as well as in percentile values, which allow the user to compare the prevalence of each health burden in a selected census tract to the prevalence of that same burden among all census tracts nationwide.

⁴⁶ These locations have lower air toxics respiratory hazards index percentiles, but higher diesel particulate matter burdens.

⁴⁷ Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion. 2021. About PLACES. <https://www.cdc.gov/places/about/index.html>.

⁴⁸ Refer to Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion. 2022. "Current Release Notes." October 25. <https://www.cdc.gov/places/help/data-notes/index.html>.

⁴⁹ Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion. Measure Definitions: Health Status. <https://www.cdc.gov/places/measure-definitions/health-status/index.html#mental-health>.

The Project Sponsors also analyzed data from a variety of state and local health department sources to augment the CDC's national data set. The data sets used were:

- NYSDOH Community Health Indicator Reports
- New York City Department of Health and Mental Hygiene (NYC DOHMH), Environment and Health Data Portal
- NYC DOHMH, 2018 Community Health Profiles Public Use Dataset
- New Jersey Department of Health (NJDOH), New Jersey State Health Assessment Data
- NJDOH and NJDEP, Health Community Planning New Jersey (HCP-NJ)

These datasets consistently provide data for counties and various units of geography smaller than a county, but none provide data at the census tract level.

For some health measures, data from 2020 are available from these state and local sources; however, the Project Sponsors chose to use 2019 as the latest year, unless the latest year available was earlier.⁵⁰ While COVID-19 may not have affected all health-measure data for 2020, 2019 data are the most recent year cited here to avoid erroneously drawing conclusions about rates and trends due to the pandemic's influence. Not all these data sources provided trends over time, but where possible, the Project Sponsors considered trends in health measures.

Importantly, the Project Sponsors only compared health data across geographies using the same data sources since state and local sources use different surveys and reporting databases, which could make comparisons invalid.⁵¹ The Project Sponsors also followed each source's practice for comparing individual counties, municipalities, and neighborhoods with each other and any larger, reference geographies.⁵²

⁵⁰ This is consistent with treatment of data by NJDOH. On the New Jersey State Health Assessment Data web site, it notes that "[h]ospital claim volume for the 2020 calendar year was markedly lower (19.9%) than for 2019, mostly due to the COVID-19 pandemic. This reduction was seen in both inpatient discharges (8.2% lower claim volume than 2019) and emergency department visits (27.3% lower claim volume than 2019). This was likely the result of hospital care being redirected to address the care for COVID-19 patients while elective surgeries and other outpatient care services were being postponed." NJDOH. 2022. "Health Indicator Report of Asthma Hospitalizations and Emergency Department Visits." New Jersey State Health Assessment Data. <https://www-doh.state.nj.us/doh-shad/indicator/view/AsthmaEDVisRate.html>.

⁵¹ For example, the Project Sponsors did not compare rates of adult asthma hospitalizations from the NJDOH for study-region counties in New Jersey with rates from the NYS DOH for study-region counties in New York City and Nassau County.

⁵² For example, the NYS DOH uses tests of statistical significance to compare rates of disease for New York City's five counties to New York City as a whole, while the NJDOH, New Jersey State Health Assessment Data compares county-level rates to the state as a whole. Meanwhile, NYC DOHMH classifies rates of disease for New York City neighborhoods as "Better," "Middle," and "Worse" as compared to other neighborhoods across the city. "Better" means that the neighborhood is in the top 1/3 of neighborhoods, "middle" corresponds to the middle 1/3, and "worse" corresponds to the bottom 1/3 of neighborhoods. For NYC DOHMH, refer to NYC Environment and Health Data Portal. Neighborhood Reports. <https://a816-dohbep.nyc.gov/IndicatorPublic/beta/neighborhood-reports/>; for NYS DOH, refer to NYS DOH. New York State Community Health Indicator Reports (CHIRS): About This Site. https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=/EBI/PHIG/apps/chir_dashboard/chir_dashboard&p=abt2; for NJDOH, refer to New Jersey State Health Assessment Data, NJDOH. NJSHAD: About Community Dashboards and Profile Reports. <https://www-doh.state.nj.us/doh-shad/community/ContentUsage.html>.

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17D-5.5 PRE-EXISTING CHRONIC DISEASE BURDENS IN LOCAL ENVIRONMENTAL JUSTICE COMMUNITIES

The relative burden of the five chronic diseases described in the EJI data set vary across the 10-county environmental justice study area's environmental justice communities more than the burdens of the air quality burdens described in the previous section. In each of the 10 counties in the study area, environmental justice census tracts have rates of the five conditions included at some of the lowest and highest rates in the nation. Of the five conditions, the region's residents have the lowest relative cancer burdens, with a population-weighted 26th percentile average. Within this section, the analysis focuses on environmental justice communities, although these burdens are not exclusively experienced by such communities in the environmental justice study area. Not all of the relevant health datasets can be differentiated between environmental justice and non-environmental justice communities; data on environmental justice communities specifically is used when available.

17D-5.5.1 County-Level Pre-Existing Chronic Disease Burdens

Concentrations of pre-existing chronic disease burden can be seen in Bronx and Essex Counties, where a majority (77.3 percent and 57.2 percent, respectively) of people in environmental justice census tracts live in tracts where three or four of the chronic diseases are also highly prevalent. **Table 17D-2** summarizes the national percentiles of these five disease burdens for all environmental justice census tracts in each of the 10 counties in the environmental justice study area. Consistent with CDC guidance, the table provides ranges rather than mean or median values.⁵³

Table 17D-2. Pre-Existing Chronic Disease Burden Percentile Ranges in the 10-County Environmental Justice Study Area by County, Environmental Justice Communities

COUNTY	ASTHMA		CANCER		HIGH BLOOD PRESSURE		DIABETES		POOR MENTAL HEALTH	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Bergen	0.0	76.0	1.0	98.0	1.0	86.0	1.0	85.0	1.0	80.0
Essex	10.0	99.0	1.0	85.0	3.0	99.0	7.0	100	4.0	99.0
Hudson	0.0	98.0	1.0	83.0	1.0	98.0	0.0	99.0	1.0	92.0
Union	21.0	93.0	2.0	59.0	23.0	91.0	24.0	96.0	17.0	95.0
Bronx	31.0	100	1.0	100	1.0	97.0	2.0	100	2.0	100
Kings (Brooklyn)	5.0	99.0	1.0	100	1.0	100	1.0	100	5.0	99.0
New York (Manhattan)	3.0	99.0	1.0	87.0	0.0	97.0	0.0	99.0	2.0	99.0
Queens	0.0	98.0	1.0	99.0	1.0	100	3.0	100	0.0	93.0
Richmond (Staten Island)	46.0	100	9.0	93.0	12.0	84.0	27.0	98.0	21.0	99.0
Nassau	4.0	95.0	0.0	99.0	0.0	80.0	0.0	89.0	0.0	83.0
10-COUNTY STUDY AREA	0.0	100	0.0	100	0.0	100	0.0	100	0.0	100

Source: CDC EJI 2022 data.

⁵³ The EJI's authors caution that "although [aggregating or averaging EJI data to estimate scores for geographies larger than a census tract] is mathematically possible, we do not recommend it. Aggregation introduces unmeasurable error and could misrepresent neighborhood-level variation in social, environmental, and health conditions." Refer to CDC and Agency for Toxic Substances Disease Registry. "EJI Frequently Asked Questions (FAQ)." https://www.atsdr.cdc.gov/placeandhealth/eji/faq_eji.html.

Across all communities within New York City, on a variety of measures, NYSDOH data show the greatest burdens of asthma, cancer, cardiovascular disease, and diabetes in the Bronx, with Richmond County having burdens of cancer and cardiovascular disease above the citywide average. Kings County is more burdened with cardiovascular illness and disease and one measure of diabetes than the city as a whole, but not asthma and cancer. Aside from cancer, New York County residents have a lower burden of illness and death from these conditions than the city as a whole. Queens County residents have rates of these burdens that are either below or statistically the same as the rates for the citywide population. **Table 17D-3** details some measures of these health burdens for New York City's five counties regardless of environmental justice designation, and compares the county rates to the citywide rates.

Table 17D-3. Rates of Pre-Existing Chronic Disease in New York City Counties, All Communities

HEALTH BURDEN	BRONX	RICHMOND	KINGS	NEW YORK	QUEENS	NEW YORK CITY
Asthma						
Percentage of Adults with Asthma	12.7	10.4	8.3	9.3	7.2	9.5
Asthma Hospitalizations per 10,000	33.6*	10.2*	12.7*	12.5*	10.0*	15.4
Asthma Deaths per 100,000	3.5*	1.6	1.7	1.8	1.1*	1.8
Cancer						
All Cancer Incidence per 100,000	445.8*	639.7*	470.1*	532.2*	501.5	496.1
All Cancer Deaths per 100,000	163.7*	141.1*	124.5*	146.6*	108.3*	131.3
Cardiovascular Disease						
Percentage of Adults with High Blood Pressure	33.1	27.8	29.3	19.4*	30.6	28.3
Heart Disease Hospitalizations per 10,000	109.7*	94.3*	85.8*	64.3*	82.4*	84.6
Heart Disease Deaths per 100,000	190.4*	237.3*	194.0*	129.4*	172.7	176.0
Heart Attack Hospitalizations per 10,000	12.6*	13.3*	12.6*	9.0*	12.0	11.7
Heart Attack Deaths per 100,000	21.7*	29.8*	21.0*	13.2*	15.1*	18.2
Diabetes						
Percentage of Adults with Diabetes	16.1*	11.0	9.7	7.1*	12.0	11.3
Diabetes Hospitalizations per 10,000 (primary diagnosis)	40.0*	19.9*	23.1	16.8*	17.0*	22.6
Diabetes Deaths per 100,000	25.7*	22.0	23.5*	13.2*	15.5*	19.3

Source: New York State Community Health Indicator Reports, most recent data (2016 or 2016-2018 or 2018 or 2017-2019).

Note: An asterisk (*) denotes that the rate or percentage shown is statistically different from the New York City rate or percentage.

Rates of current adult asthma in the Bronx, across all communities, observed between 2017 and 2019, were higher than the rate across the city, but not statistically different. However, the rates of hospitalization and death were both statistically higher than the citywide rates, and NYSDOH has found that rates of asthma death have been stable when it compared data collected between 2013 and 2015 with data

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collected between 2016 and 2018. On Staten Island, the percentage of adults with asthma is statistically similar to the citywide rate, but rates of asthma deaths have increased in recent years.⁵⁴

The incidence of all cancers in the Bronx were below the citywide rate and were statistically different; furthermore, analyzing data from 2013 through 2018, the NYSDOH saw a statistically significant improvement in cancer incidence. However, cancer deaths among Bronx residents were more common than across the city and have remained steady between 2010 and 2018.⁵⁵ Staten Island's age-adjusted all cancer incidence rate has been consistently higher than New York City's rate, and NYSDOH has not seen a substantial change in recent years when it compared data collected between 2013 and 2015 with data collected between 2016 and 2018. Though age-adjusted all cancer mortality rates on Staten Island have been higher than rates across the city, Staten Island's rates have had a statistically significant decline.⁵⁶

Though rates of high blood pressure are not statistically different from the citywide rate in the Bronx or Staten Island, the age-adjusted rates of heart disease hospitalization and death are higher in both counties. Heart disease death rates have not shown substantial change in recent years for either of the two counties or New York City.⁵⁷

The Bronx age-adjusted diabetes hospitalization rate was almost twice that of New York City. Age-adjusted diabetes deaths have been statistically unchanged since 2014 and higher in the Bronx than the across the city.⁵⁸ Age-adjusted diabetes hospitalizations occur at a lower rate in Staten Island than across the city, and while age-adjusted diabetes deaths occur at a higher rate in Staten Island than across the city when looking at 2017–2019 data, the rate is statistically similar to that for the city.⁵⁹

In its Community Health Indicator Reports, NYSDOH compares Nassau County's health measures with those for the rest of New York State outside of New York City. Using this comparison, Nassau County's residents, across all communities, are more burdened with asthma hospitalizations, as well as heart disease hospitalizations (**Table 17D-4**). For all of the other measures examined, Nassau's residents have rates that are lower or similar to those for New Yorkers living outside of New York City.

⁵⁴ New York State Community Health Indicator Reports, Age-adjusted asthma hospitalization rate per 10,000, Age-adjusted asthma mortality rate per 100,000, Age-adjusted percentage of adults with current asthma. Due to changes in hospital diagnosis coding, the NYSDOH states that rates over time are not comparable, and trends are not reported here. Note that the NYSDOH did not compare trend data for asthma deaths using a statistical test. Instead "the Indicator Performance is based on a simple comparison between the two most recent time periods." Refer to https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=%2FEBI%2FPHIG%2Fapps%2Fchir_dashboard%2Fchir_dashboard&p=ch&cos=62&ctop=1&ctop=2&ctop=3&ctop=10&ctop=13.

⁵⁵ New York State Community Health Indicator Reports, Age-adjusted all cancer incidence rate per 100,000.

⁵⁶ Ibid.; NYC DOHMH, 2018 Community Health Profiles Public Use Dataset. Premature mortality due to cancer rate.

⁵⁷ New York State Community Health Indicator Reports, Age-adjusted cardiovascular disease mortality rate per 100,000; Age-adjusted cardiovascular disease hospitalization rate per 10,000. Due to changes in hospital diagnosis coding, the NYS DOH states that rates over time are not comparable, and trends are not reported here.

⁵⁸ New York State Community Health Indicator Reports, Age-adjusted diabetes mortality rate per 100,000. New York State Community Health Indicator Reports, Age-adjusted diabetes hospitalization rate per 100,000. Due to changes in hospital diagnosis coding, the NYS DOH states that rates over time are not comparable, and trends are not reported here.

⁵⁹ New York State Community Health Indicator Reports, Age-adjusted diabetes mortality rate per 100,000.

Table 17D-4. Rates of Pre-Existing Chronic Disease in Nassau County, All Communities

HEALTH BURDEN	NASSAU	NY STATE, EXCLUDING NEW YORK CITY
Asthma		
Percentage of Adults with Asthma	8.1	10.8
Asthma Hospitalizations per 10,000	8.4*	6.6
Asthma Deaths per 100,000	0.6	0.7
Cancer Indicators		
All Cancer Incidence per 100,000	658.4	656.8
All Cancer Deaths per 100,000	122.6*	144.8
Cardiovascular Disease		
Percentage of Adults with High Blood Pressure	28.2	29.4
Heart Disease Hospitalizations per 10,000	96.2*	84.0
Heart Disease Deaths per 100,000	184.3*	165.3
Heart Attack Hospitalizations per 10,000	13.9*	14.6
Heart Attack Deaths per 100,000	16.2*	25.8
Diabetes		
Percentage of Adults with Diabetes	7.3	9.2
Diabetes Hospitalizations per 10,000 (primary diagnosis)	15.0*	16.5
Diabetes Deaths per 100,000	11.3*	16.6

Source: New York State Community Health Indicator Reports, most recent data (2016 or 2016-2018 or 2018 or 2017-2019).

Note: An asterisk (*) denotes that the rate or percentage shown is statistically different from the New York State, excluding New York City, rate or percentage.

In New Jersey, across all communities, the percentage of adults who reported having asthma in the period from 2016 to 2018 was highest in Essex County at 8.8 percent, followed by Union County (8.4 percent), Hudson County (8.0 percent), and—with the lowest rate—Bergen County (6.2 percent). However, none of these rates was statistically different from the overall New Jersey rate (8.4 percent). These percentages were stable for the four counties and the state of New Jersey between 2011 and 2018.⁶⁰ Similarly, asthma emergency room visits were much higher in Essex than the statewide rate, at an age-adjusted rate of 107.4 per 10,000, compared with 55.7 per 10,000 for all of New Jersey. Rates in Hudson County (60.8) and Union County (56.9) were similar to the state figure, and the rate was much lower in Bergen County at 30.6 per 10,000.⁶¹

Cancer deaths were more common in Essex County, as well, with an age-adjusted rate of 142.2 per 100,000, though this rate was similar to the statewide rate of 144.6, and higher than the rates for the other counties. Bergen and Union counties had similar rates of 132.0 and 133.2 per 100,000, respectively, while Hudson had a rate of 125.1.⁶²

⁶⁰ NJSHAD. Currently have asthma, age-adjusted %.

⁶¹ Health Community Planning New Jersey (HCP-NJ). Asthma Emergency Room Visits, age-adjusted Rate per 10,000. Note that the HCP-NJ reports do not provide tests of statistical significance between rates observed for counties and the state; the comparison made here is based on numerical difference only. HCP-NJ reports do not make trend data available for comparisons over time.

⁶² HCP-NJ. All Cancer Deaths, Age-adjusted rate per 100,000. Note that the HCP-NJ reports do not provide tests of statistical significance between rates observed for counties and the state; the comparison made here is based on numerical difference only. HCP-NJ reports do not make trend data available for comparisons over time.

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The share of adults with diabetes was highest in Hudson County, based on data collected between 2016 and 2018 (11.5 percent), followed by Essex County (10.7 percent), Union County (9.4 percent), and Bergen County (7.5 percent). Like the percentage of adults with asthma, these figures are not substantially different from the statewide percentage in 2018 (9.3 percent). However, age-adjusted rates of diabetes deaths were substantially worse than the statewide rate (18.2 per 100,000 residents) in Essex County (25.0), Hudson County (27.1); the rate was lower in Bergen County (13.4), and Union County's rate was statistically similar (20.3).⁶³ These rates have not substantially changed between 2011 and 2018.⁶⁴

All four counties had statistically similar percentages of adults who said that they had had a heart attack, and those rates were stable over the period from 2011 to 2018.⁶⁵ Heart attack hospitalization age-adjusted rates were close to the statewide figure (16.3 per 10,000) in Essex and Hudson Counties (16.4 and 17.7, respectively), and lower in Bergen and Union Counties (12.5 and 12.6 per 10,000, respectively).⁶⁶

17D-5.5.2 Municipality- and Neighborhood-Level Pre-Existing Chronic Disease Burdens

The CDC EJI program designates communities as experiencing a “high” level of a chronic disease prevalence if it falls within the top third of census tracts nationwide for that indicator. For descriptive purposes the term “high” is used in this section to refer to census tracts within the top third of an indicator's prevalence based on the data in the CDC EJI mapping tool.⁶⁷ Below the county level, among environmental justice communities in the 10-county environmental justice study area, some contiguous areas with three or four pre-existing chronic diseases at rates in the top third nationwide are found in all portions of Bronx County; Far Rockaway, Jamaica, and Southeast Queens in Queens County; Flatbush, Brownsville, East New York, Bedford Stuyvesant, and Greenpoint, Kings County; East Harlem, Central Harlem, and the portions of the Lower East Side adjacent to the East River and the Franklin D. Roosevelt (FDR) Drive in New York County; Port Richmond and New Brighton, Richmond County; some portions of Hempstead, Nassau County; most of Newark, all of East Orange and Irvington, and the eastern portion of West Orange, Essex County; the central portion of Jersey City, Hudson County; as well as in Roselle and Plainfield in Union County. Within

⁶³ NJSHAD. Age-adjusted death rate due to diabetes.

⁶⁴ NJSHAD. Percentage with diabetes.

⁶⁵ NJSHAD. Percentage who have had a heart attack, age-adjusted %.

⁶⁶ HCP-NJ. Heart Attack (AMI) Hospitalizations, Age-adjusted Rate per 10,000. HCP-NJ reports do not make trend data available for comparisons over time.

⁶⁷ The different mapping tools, while drawing from the same primary data sources, use different descriptive thresholds to identify potentially vulnerable communities. USEPA's EJScreen's Technical Document states that communities at the 80th percentile are “may merit closer attention.” In EJScreen, locations at least at the 80th percentile but less than the 90th are shown in yellow, while those at the 90th percentile but less than 95th percentile are orange on the maps, and those at the 95th percentile or above are shown in red on maps and reports. These colors call attention to certain locations as a very simple way to communicate relative screening results. There is no official policy significance assigned to each individual color on the maps, but the choice of these categories or “bins” is noteworthy because it signifies that certain ranges of percentiles may merit closer attention. The [Technical Documentation for the Environmental Justice Index 2022](#) identifies census tracts as a “tract of interest” if certain indicators (e.g., disease prevalence) are in the top third (33.33 percent) of all census tracts included in the EJI. The Climate and Economic Justice Screening Tool uses a 90th percentile threshold for identifying disadvantaged communities.

Bergen County, populations with high prevalence of three or four diseases can be found in one tract each in Fort Lee, Cliffside Park, and Englewood.

Asthma prevalence is high in areas across almost all the environmental justice tracts in Bronx County; nearly all of Far Rockaway, Greenpoint, Jamaica, and Southeast Queens in Queens County; Brownsville, Flatbush, East New York, Canarsie, the central portion of Borough Park, Coney Island, and Bedford-Stuyvesant in Kings County; all of East Harlem and Central Harlem, most of Washington Heights, and the portions of the Lower East Side adjacent to the East River and the FDR Drive in New York County; the sections of Richmond County along Kill Van Kull from Port Ivory in the west to Rosebank in the east; many of the environmental justice census tracts in Hempstead and North Hempstead in Nassau County; most of Newark, all of Irvington, East Orange, and Orange in Essex County; the central portion of Jersey City in Hudson County; and finally, much of Elizabeth, Hillside, Roselle, and Plainfield in Union County. In Bergen County, asthma prevalence is high in one tract each within Englewood and Mahwah.

Considering some of the historical land use and transportation patterns, the following tables and discussion provide health data for pre-existing chronic disease burdens in neighborhood locations near key traffic generators.

Neighborhoods Near the Cross Bronx Expressway

The Cross Bronx Expressway passes between the United Hospital Fund (UHF)⁶⁸ neighborhoods of Crotona–Tremont and High Bridge–Morrisania between the Alexander Hamilton Bridge and Grand Concourse, continues through Crotona–Tremont until White Plains Road in Parkchester, and then becomes the Cross Bronx Expressway Extension before crossing the Pelham–Throgs Neck neighborhood and meeting the Throgs Neck Bridge. Additionally, the Major Deegan Expressway passes through High Bridge–Morrisania along the Harlem River. Looking at the health measures highlighted here, High Bridge–Morrisania is the most burdened by pollution-related illness and disease, followed by Crotona–Tremont, and then Pelham–Throgs Neck with the lowest burdens of the three.

NYC DOHMH-estimated rates of asthma and other diseases or illnesses attributable to PM_{2.5} in these three neighborhoods are almost universally above those in the city's other neighborhoods, as described in **Table 17D-5**.⁶⁹ These rates are almost all highest in the UHF neighborhood of High Bridge–Morrisania, second highest in Crotona–Tremont, and lowest in Pelham–Throgs Neck.⁷⁰

⁶⁸ United Hospital Fund neighborhoods (UHF) have boundaries based on ZIP codes. This geography was created by the Health Department, the United Hospital Fund, and other city agencies in the 1980s. They were designed for health research, and to be similar to NYC's Community Districts. See NYC DOHMH. "Neighborhood boundaries on the EH Data Portal." NYC Environment and Health Data Portal. <https://a816-dohbep.nyc.gov/IndicatorPublic/beta/data-stories/geographies/>.

⁶⁹ Note that the rates for New York City are shown in **Table 5** for comparison but that, following the method used by NYC DOHMH, the Project Sponsors have compared rates between neighborhoods.

⁷⁰ For each health measure, the Environment and Health Data Portal groups neighborhoods into the categories of "Better," "Middle," and "Worse" as compared to other neighborhoods across the city. "Better" means that the neighborhood is in the top 1/3 of neighborhoods, "middle" corresponds to the middle 1/3, and "worse" corresponds to the bottom 1/3 of neighborhoods. See NYC Environment and Health Data Portal. "Neighborhood Reports." <https://a816-dohbep.nyc.gov/IndicatorPublic/beta/neighborhood-reports/>.